ပြည်ထောင်စုသမ္မတ မြန်မာနိုင်ငံတော်အတွင်း

နိုင်ငံခြားရင်းနှီးမြှုပ်နှံမှုပြုလုပ်ရန် ရင်းနှီးမြှုပ်နှံလိုသူ၏

ဆောင်ရွက်ရန် အဆိုပြုချက်

"ပူးမား အင်နာဂျီ အေးရှားဆန်း ကုမ္ပဏီလီမိတက်"

PROPOSAL OF THE INVESTOR

FOR MAKING FOREIGN INVESTMENT

IN THE REPUBLIC OF THE UNION OF MYANMAR

"PUMA ENERGY ASIA SUN COMPANY LIMITED"

PUMA ENERGY

PUMA ENERGY IRRWADDY PTE LTD

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15. Incorporation Certificate of Puma Energy (Myanmar) Pte Ltd duly notarized by a Notary Public and legalized by Myanmar Embassy
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PUMA ENERGY IRRAWADDY PTE LTD

Chairman
Myanmar Investment Commission (MIC),
Building No. (32), Nay Pyi Taw,
The Republic of the Union of Myanmar

Subject: **Application for Investment Permit for carrying out the business of storage of bitumen and petroleum products and providing storage services for petroleum products to third parties in the Republic of the Union of Myanmar under Foreign Investment Law**

Your Excellency,

In June 2013, Puma Energy Group Pte Ltd ("Puma Energy") was awarded the Ministry of Transport ("MoT") and Myanmar Port Authority ("MPA") tender for the leasing of Thilawa Port Plot (3), and the construction of storage tanks for bitumen and petroleum products (the "Tender").

We are honoured to have been chosen by the MOT and the MPA as their investment partner in this most critical of industries to support Myanmar's continued economic growth.

Under the terms of the Tender, Puma Energy will:

- Rent Thilawa Port Plot No,(3) on a long-term basis from the MPA;
- Build and operate a jetty and storage terminal on Thilawa Port Plot No. (3) for the purpose of bitumen and petroleum products; and

The primary objective of the Tender is to build the infrastructure and develop the business necessary to enable the bulk import of bitumen into the Republic of the Union of Myanmar, to ensure the demands of the country's road building programme can be met with high quality, lowest cost product.

Puma Energy has a long experience in the field of bitumen storage, importation, transportation and domestic delivery, having partnered with governments across the globe as their chosen investor, joint venture partner and business operator in this critical supply chain.

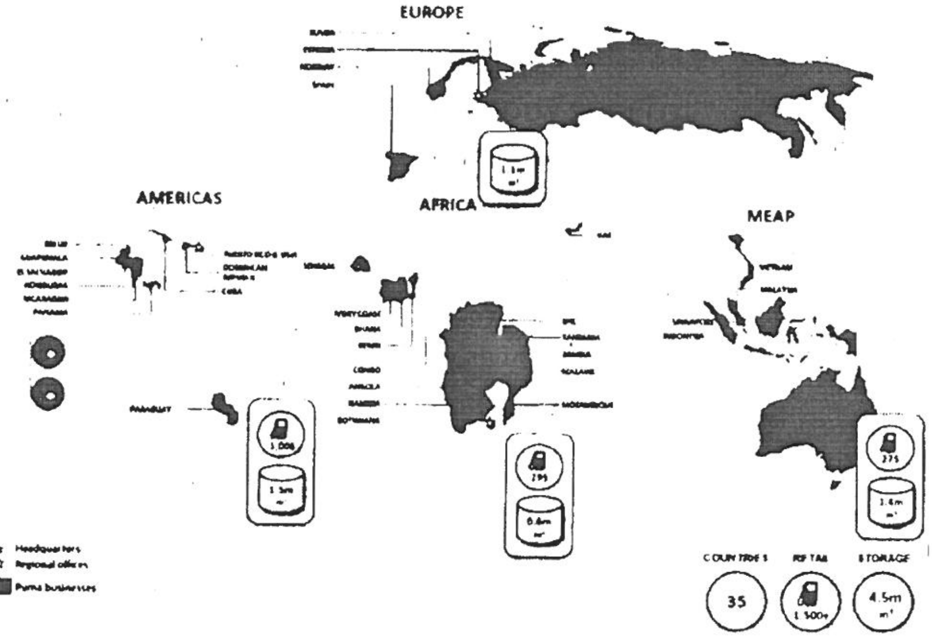
As a group we strongly believe in Myanmar's future economic growth and are fully committed to playing our part in facilitating that growth. We are very excited to be the first foreign investor within the petroleum downstream sector. In order now to proceed in a timely fashion with the investment and business development as set out under the Tender, we hereby respectfully submit our plans for approval from the Myanmar Investment Commission ("MIC").

PUMA ENERGY IRRAWADDY PTE LTD

1. **Introduction to the Puma Energy Group**

Puma Energy Group Pte Ltd ("Puma" or "Puma Energy") is a fast growing, vertically integrated midstream and downstream oil group active in Latin America, Europe, the Middle East, and Asia Pacific. Established in 1997, Puma Energy has grown to become one of the world's largest independent midstream and downstream oil companies operating in over 35 countries globally.

Headquartered in Singapore, Puma Energy has regional offices in South Africa, Switzerland, Puerto Rico and Australia, and directly employs over 6,000 people worldwide.



Puma Energy was originally a wholly owned subsidiary of Trafigura, one of the world's largest independent commodity trading companies. Although Puma Energy's shareholder base has since widened, Trafigura remains Puma Energy's largest shareholder. As the 3rd largest independent trader of petroleum products worldwide, Trafigura is Puma Energy's primary supplier of petroleum products, ensuring its security of supply.

Puma Energy's business is split into two main lines of business: "midstream" and "downstream.

PUMA ENERGY

PUMA ENERGY IRRAWADDY PTE LTD

MIDSTREAM

- Supply, storage and transportation of petroleum products within the international market.
- Terminals: over 55 locations
- Storage capacity: 4.5 million m^3
- Storage used by 3rd parties: 2.2 million m^3

DOWNSTREAM

- Active in all aspects of the fuels marketing business, including:
  - Retail — over 1,500 Puma sites
  - B2B — over 3,000 customers (mines, powergen, etc.)
  - Wholesale — sales to re-sellers
  - Aviation — serving 24 airports
  - Bunkering — Africa / CentAm
  - Lubricants — Own and Castrol brands
- Products include gasoil, gasoline, jet and niche products such as lubricants, solvents, bitumen and LPG .

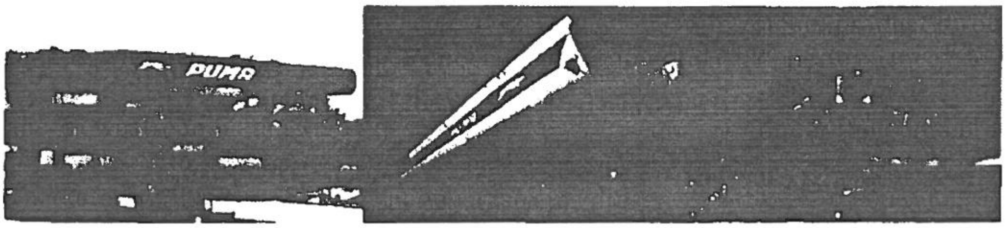
In the 'midstream' Puma Energy specialises in the supply and transportation of petroleum products within regional and domestic market-places, investing in, and operating, infrastructure along the supply chain to ensure in-house operational control over security of supply, cost efficiency in delivery and product quality assurance.

Puma has over 55 petroleum product terminals worldwide, with a combined capacity of 4.5 million KL of installed capacity. All of this capacity is operated by in-house Puma staff. The quality of Puma's assets and the standard of its operations are best in class. Through these facilities Puma Energy not only services the needs of its own business, but it also provides storage services to 3rd parties in many locations. Puma Energy's customers, who are typically oil majors or oil traders, recognise the quality and sophistication of the services Puma Energy offers – over 50% of Puma Energy's installed capacity is used by 3rd parties. In 2012 the company handled over 24 million KL of petroleum product through its locations, with best in class Health, Safety and Environmental (HSE) performance.

In the 'downstream', Puma Energy operates in over 30 countries under the Puma brand. In many markets the company is the market leader, and invariably the largest independent oil marketer. While Puma Energy has a large retail presence with over 1,500 retail stations worldwide, the company considers its core business to be the supply of refined petroleum products to its industrial customers, most notably in the mining and power generation sector. In Southern Africa Puma Energy is the market leader in the supply of gasoil to the mines in the 'Copper Belt' region.

Puma Energy has a strong lubricants business worldwide, offering both own-brand Puma lubricants and for its industrial customers the company has a strategic alliance with Castrol – being one of their largest (and in many areas exclusive) distributors worldwide.

PUMA ENERGY IRRAWADDY PTE LTD



2. Form of Investment

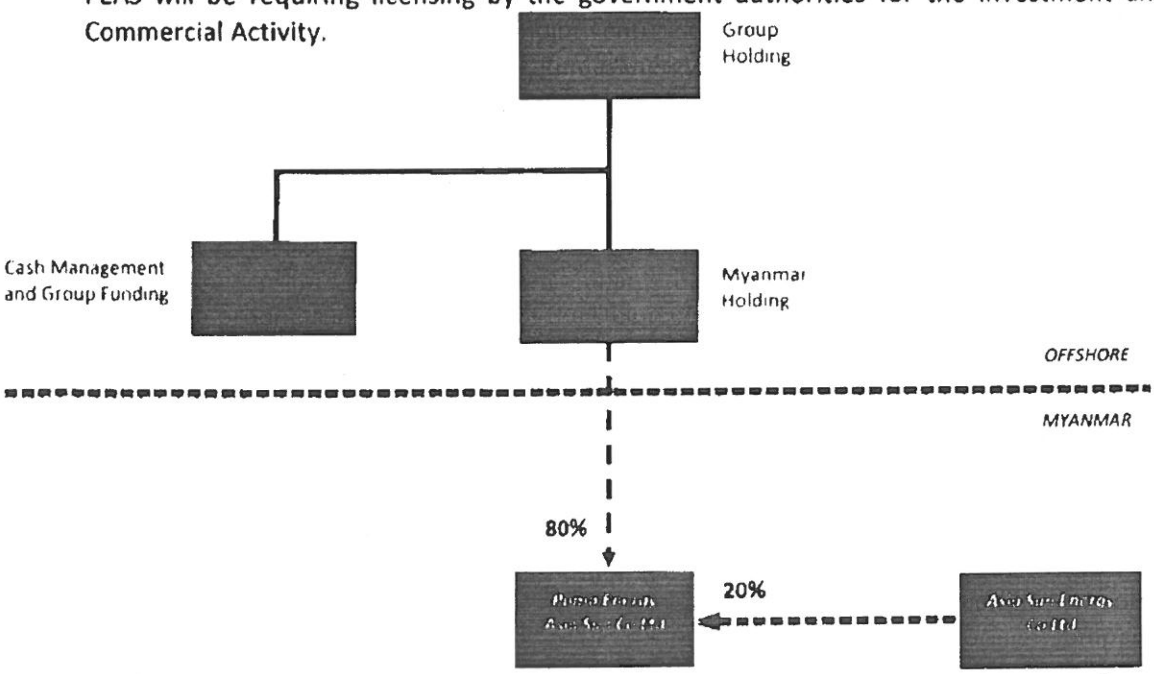
Puma Energy will establish a new Myanmar registered company to carry out the investment and the Commercial Activity in Myanmar – a company to be called Puma Energy Asia Sun Co, Ltd ("PEAS").

PEAS will be established as a foreign joint venture company in the Republic of the Union of Myanmar, 80% of shares owned by Puma Energy Irrawaddy Pte Ltd (foreign company), incorporated in Singapore and 20% of shares owned by Asia Sun Energy Co., Ltd ("Asia Sun") under Foreign Investment Law. Asia Sun Energy Co Ltd. is a Myanmar-registered company wholly owned by Myanmar citizens, active in a wide range of business activities in Myanmar.

PEAS will be the foreign joint venture company that will carry out storage of bitumen and petroleum products in the Republic of the Union of Myanmar.

Under the joint venture, both Puma Energy Irrawaddy Pte Ltd and Asia Sun Energy Co., Ltd will contribute capital into PEAS to finance the investment according to their shareholding ratio. In addition to the capital contribution, Puma Energy Funding Ltd incorporated in Bahamas will provide debt finance to PEAS.

PEAS will be requiring licensing by the government authorities for the investment and Commercial Activity.



PUMA ENERGY IRRAWADDY PTE LTD

3. Investment and Commercial Activity

The main investment activity will be the construction and operation of a Petroleum Product Terminal at Plot No 3 in Thilawa Port;

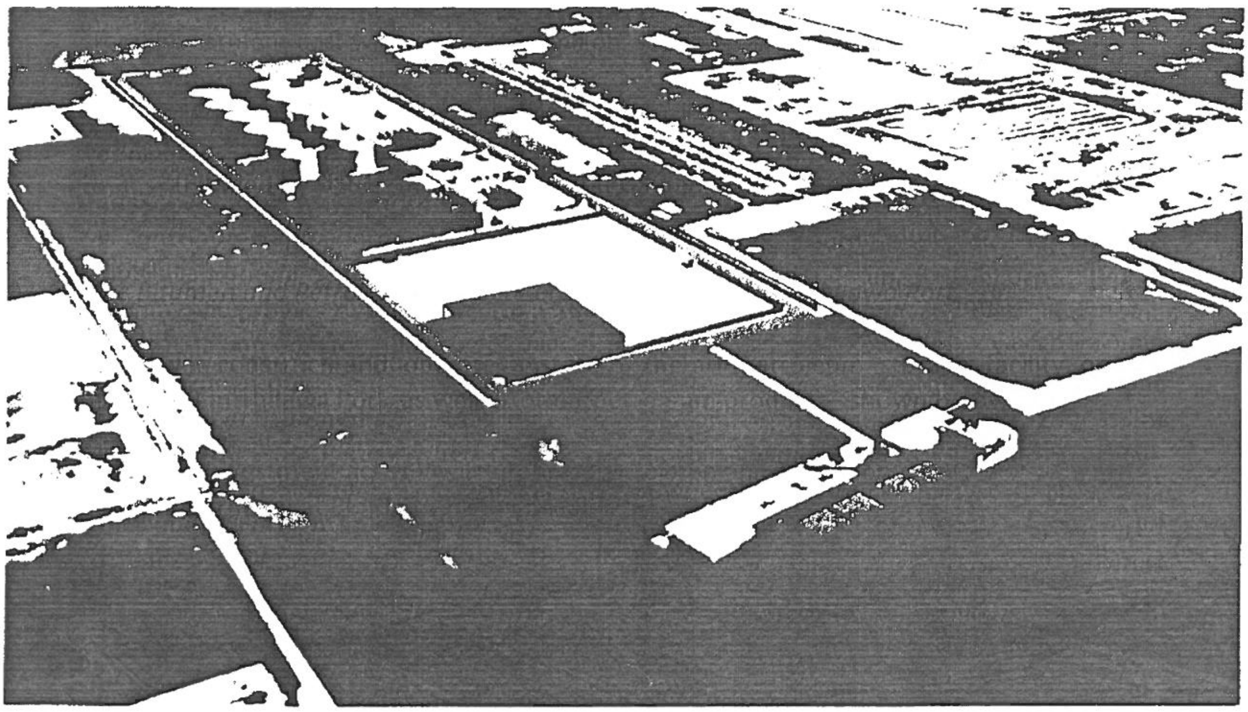
Total investment cost will be US$86.4 million, which is broken down as follows:

- Terminal Investment cost: US$86.4 million

  (Funded by US$17 million equity and US$69.4 million of debt)

The Bitumen and Petroleum Product Terminal at Plot No 3 in Thilawa Port

PEAS will construct and operate a state-of-the-art petroleum storage facility on plot number 3 in Thilawa Port, as well as other petroleum products– shown below



The salient features of the facility are:

- Petroleum project and jetty with 2 berths (9m draft) able to receive 5,000dwt to 50,000 dwt ocean-going vessels and load smaller river barges (1,000 dwt – 2,000 dwt).
- Storage capacity of up to 88,000 m3 for bitumen and other petroleum products (jet fuel, gas oil, gasoline and lubricants);
- Truck loading facilities: 6 loading positions for trucks.
- Other facilities including office buildings, laboratories, a training centre and a warehouse, all related to the petroleum activity.

The construction period will be about 14 to 18 months from the date of commencement.

Storage of bitumen and other petroleum products

As the infrastructure identified above is constructed, PEAS will develop a Commercial Activity to store bitumen and other petroleum products, using the infrastructure constructed.

PEAS will earn income by providing storage services to 3rd parties using the Thilawa storage terminal

Further details on this are provided in the Supporting Documents in Appendix B and in the Business Plan attached in detailed Schedules.

The Investment and Commercial Activity have the following characteristics:

- It is a labour intensive activity, both during the construction phase and during the business operation phase.
    - The terminal at Thilawa will employee approximately 100 people during the construction phases at its peak, and 42 people during the operational phase.
- The business and the investment is, by nature, capital intensive.
- The business applies high technology in Myanmar both in the construction phase and in the operation
    - We will deploy state-of-the-art technology in the terminals and our service stations.

- We will use Thilawa as an operational training centre to facilitate knowledge transfer to our employees.

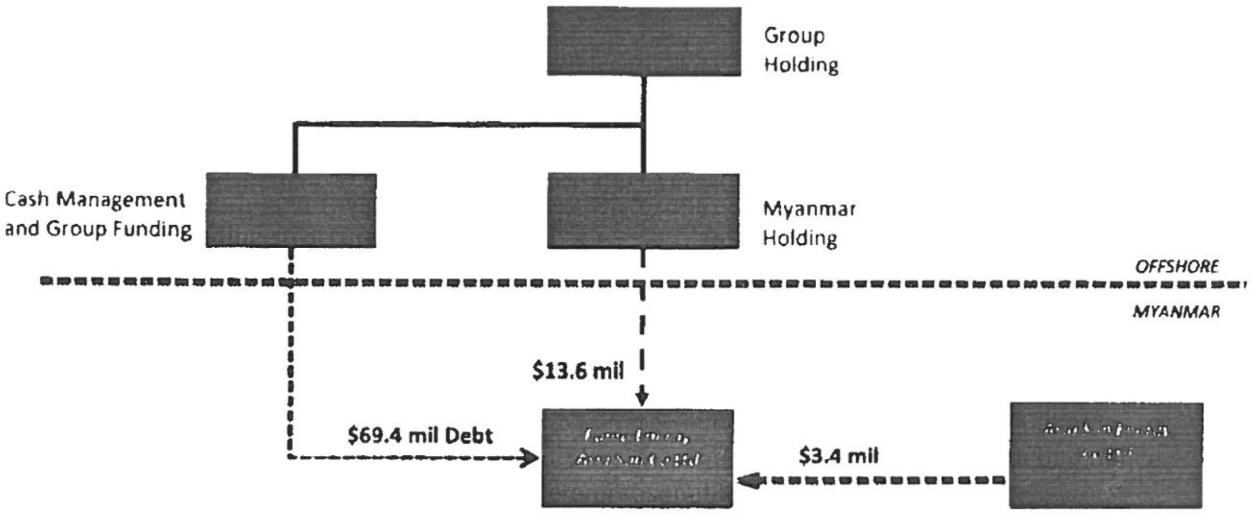
- We will deploy new technology in the bitumen market including new specialized bitutainers to improve the in-land distribution of bitumen.

4. Funding structure

The whole project will be funded by a mixture of shareholder capital and debt as follows:

- Shareholder capital US$ 17 million
- Debt = US$69.4 million

The debt finance will be provided by Puma Energy Funding Ltd incorporated in Bahamas to guarantee the financing for the project. This may be replaced by 3rd party debt finance (bank financing) if this becomes available on reasonable commercial terms.



5. Benefits of the project for Myanmar

We believe our project will provide the following benefits to Myanmar:

- The new import terminal in Thilawa Port will debottleneck the current supply chains for bitumen and petroleum product imports;

- Not only will this reduce the cost of the product to help stimulate the economy, our facilities will hold strategic stocks in-country to ensure continuous and reliable supply to industry;

- The facility guarantees that Myanmar will be able to import volume of bitumen sufficient to meet the demands of the road building programme;

- The terminal and depot developments will be developed in full compliance with any relevant local and international norms and regulations (American Petroleum Institute (API), American Society Mechanical Engineering (ASME), and National Fire Protection Association (NFPA)) and will be operated according to the most stringent operational health and safety procedures. This will significantly reduce the risk of pollution or accident of the ship-to-ship;

- Our investments will maximise local procurement and local content in all aspects including construction contracting and employment, ensuring the benefits of the $86.4 mil investment for felt directly by the local business communities and populations;

- Over thousand jobs will be created directly, and a further thousand jobs created indirectly by this investment plan;

- Our training centre in Thilawa will ensure knowledge transfer to our local employees in key areas of petroleum product handling, environmental protection, marine safety, and oil spill response; and

- The terminal will be financed by Puma Energy's own cash during the construction period. This self-financing insulates the investment from unstable financial conditions and removes any reliance on third party funding.

6. Application for exemptions and reliefs

PEAS believes that our project is fully qualified for general exemptions and reliefs under Section 27 of Foreign Investment Law of Myanmar, which are mainly including but not limited to:

- An income tax exemption for a period of five consecutive years from the first year PEAS will need to pay income tax due to the Myanmar tax authorities. Moreover, in a case where the investment is beneficial to Myanmar, the income tax exemption or relief should be extended for a further suitable period depending upon the success of the business;

- Right to carry forward and set-off the loss up to three consecutive years from the year the loss is actually sustained within two years following the enjoyment of exemption or relief from income tax;

- Exemption of import duty, commercial tax, withholding tax and other internal taxes for the local purchase, and the importation of the machinery, equipment, instruments, machinery components, spare parts, materials and

other goods including those are leased and will be brought into Myanmar on a "draw-back" basis for this project to be granted to PEAS and its respective contractors and sub-contractors including Myanmar contractors and sub-contractors (Please refer to Appendix for a list of machinery, equipment and other goods to be brought into Myanmar under lease basis and importation on the "draw back" system.);

- Exemption of commercial tax, withholding tax, stamp duty and other internal taxes for the provision of construction, design and other services to be performed in Myanmar for this project to be granted to PEAS and its respective contractors and sub-contractors including Myanmar contractors and sub-contractors;

- Exemption of income tax on profit, which is maintained in reserve fund for reinvestment and re-invested within one year after the reserve is made;

- Right to pay income tax on the income of foreign employees employed by the company at the same rates applicable to Myanmar citizens;

- Tax exemption on income arising from the re-export of products outside of Myanmar (including bitumen, petroleum products)

- Right to deduct from taxable income the research and development expenses relating to the business and are carried out within Myanmar;

- Exemption for relief of duty, other internal tax or both on imported raw material/materials/products (including bitumen and petroleum products) for the first three years after the completion of construction of business;

- If the investor increases the amount of investment and expands the business within the approved timeframe, exemption of customs duty or other internal taxes or both on imported and locally sourced machinery, equipment, instruments, machinery components, spare parts, materials, construction, design and other services used by PEAS for the expansion of business with approval of the MIC. This exemption shall equally apply in case where the above goods are imported and locally sourced by PEAS' respective contractors and sub-contractors including Myanmar contractors and sub-contractors;

- Exemption of commercial tax arising from the re-export of products outside of Myanmar (including bitumen and petroleum products and etc.);

- Exemption of withholding tax on interest and dividend payment during the operation period of the business;

- Right to deduct depreciation of machinery, equipment, building or other capital assets used in the business at the rates as prescribed by the MIC;

- Right to recharge the expenses spent on this project by Puma Energy Irrawaddy Pte Ltd before PEAS has been incorporated; total expenses spent on this project by Puma Energy Irrawaddy Pte Ltd before PEAS' incorporation is $5 million ($3.4 million for backfilling and $1.6 million for project design) and these expenses of $5 million are contributed as capital in kind in PEAS from Puma Energy Irrawaddy Pte Ltd.; and

- Exemption of advance income tax of 2% levied on the importation and exportation of goods including construction materials, raw materials, machinery, equipment, bitumen and petroleum products and dry bulk products, goods imported under "draw back" system and any other goods during the construction period and business operation period based on the Notification issued by the Internal Revenue Department on 14 June 2013.

Specific incentives requested to support the project are:

- the terminal to be granted bonded status;

- PEAS will be permitted to own and operate bank accounts overseas for any payments related to the construction of the Petroleum Product Terminal and its business operation in any foreign currency. PEAS will also be permitted by the MIC to the fullest extent permitted by law and regulations to obtain foreign loans, exchange MMK into US$ to meet its payment obligations and remit all payments out of Myanmar, including:

    - All the trade payments to suppliers;
    - All the payments under loan agreements, EPC/construction agreements, management agreements, license agreements and any other contracts/agreements;
    - All the payments in relation to foreign investment, including dividend, interest, return of capital and repayment of shareholder loans/inter-company loans/bank loans (if any)

- Exemption of all taxes arising from the leasing of land from the Myanma Port Authority including property tax, stamp duty and any other applicable taxes and levies;

- Approval of Central Bank of Myanmar for a US$ 69.4 million to be taken by PEAS from Puma Energy Funding Ltd (form of loan agreement attached); and

PUMA ENERGY IRRAWADDY PTE LTD

- Partially laden 55,000k dwt vessels (LOA185m, Beam 32m, draft 9m) will be allowed to berth at the terminal jetty.

It is my sincere hope that Your Excellency's Commission will be able to give this matter a favorable consideration and also grant approval at the earliest convenience.

Finally, I assure that the proposed investment will be contributing greatly to the economic development of the Republic of the Union of Myanmar.

Yours faithfully,

Mr. Robert Michael Jones
(Promoter of the Proposal)

PUMA ENERGY IRRAWADDY PTE LTD

Appendix A: PUMA ENERGY BROCHURE

PUMA ENERGY IRRAWADDY PTE LTD

Appendix B: SUPPORTING DOCUMENTS

PUMA ENERGY IRRAWADDY PTE LTD

Annex-1

UNDERTAKING

Our Company, **Puma Energy Asia Sun Co., Ltd** undertakes to comply as follows:

- that the revenue in foreign currency and Kyat earned from the operation of the proposed project, shall have to be deposited into the Company's bank accounts in foreign currency and in Kyat to be opened with Myanmar Foreign Trade Bank, or Myanmar Investment and Commercial Bank and other suitable authorized private banks;

- that required amount of wages, salaries and other expenses in Kyat shall be paid out of Kyat income received from operation. If Kyat income does not meet the Kyat expenses, the shortage amount of Kyat expenses shall be paid after exchanging foreign currency into Kyat at the official Licensed Money Changers.

Signature : [signature]
Name : Mr. Robert Michael Jones
Designation : Promoter of the Proposal

PUMA ENERGY IRRAWADDY PTE LTD

Annex - 2

Undertaking regarding Maintenance of Environment

Puma Energy Asia Sun Co., Ltd will follow all disciplines regarding maintenance of environment set by the Ministry of Environmental Conservation and Forestry.

Puma Energy Asia Sun Co., Ltd will maintain Environmental Standards regarding (a) Waste Water (b) Waste Gas, Offensive Smell and Dust (c) Noise, set by the Lessor.

Puma Energy Asia Sun Co., Ltd will conduct (a) Environmental Impact Control (b) Environmental Monitoring Plan and (c) Environmental Management in the Facilities in accordance with ENVIRONMENTAL CODES.

Signature :

Name : Mr. Robert Michael Jones

Designation : Promoter of the Proposal

PUMA ENERGY

PUMA ENERGY IRRAWADDY PTE LTD

Annex - 3

UNDERTAKING

- Our Company, **Puma Energy Asia Sun Co., Ltd** undertakes that the company will take responsibility to deduct income tax of our staff working in our company based on their salary income in compliance with the provisions of the Myanmar Income-tax Law.

Signature :
Name : Mr. Robert Michael Jones
Designation : Promoter of the Proposal

PUMA ENERGY IRRAWADDY PTE LTD

Annex - 4

UNDERTAKING

- Our Company, **Puma Energy Asia Sun Co., Ltd** undertakes that 1% of profit earned from our business will be used to fulfill Corporate Social Responsibilities (CSR).

Signature	:
Name	: Mr. Robert Michael Jones
Designation	: Promoter of the Proposal

1, Marina Boulevard, #28-00, Singapore 018989.

PUMA ENERGY

PUMA ENERGY IRRAWADDY PTE LTD

Annex - 5

UNDERTAKING

Our Company, **Puma Energy Asia Sun Co., Ltd** undertakes that the company will submit Initial Environmental Examination (IEE) and Environmental Management Plan (EMP) to Myanmar Investment Commission.

Signature	:	
Name	:	Mr. Robert Michael Jones
Designation	:	Promoter of the Proposal

Embassy of the Republic of the Union of Myanmar
Singapore

No. 0111 / 37 24 / 2014
Date : 9 January 2014

Seen at the Embassy of the Republic of the Union of Myanmar in Singapore, and certified that the signature appearing at the foot of the annexed document is the signature of Lai Wai Leng, Assistant Director, Singapore Academy of Law, Republic of Singapore.

(Aung Latt)
Charge d' Affaires a. i.

SINGAPORE ACADEMY OF LAW

I, Lai Wai Leng, Assistant Director, Singapore Academy of Law, Republic of Singapore, hereby certify that Pascal Baylon Netto is a duly appointed Notary Public practising in Singapore, and that the signature appearing at the foot of the annexed Notarial Certificate dated 6th January 2014 is the signature of the said Pascal Baylon Netto.

Dated at Singapore this 6th day of January 2014.

LAI WAI LENG
ASSISTANT DIRECTOR
SINGAPORE ACADEMY OF LAW

MINISTRY OF FOREIGN AFFAIRS SINGAPORE

Certified true signature

Peter Chua Ong Sang

08 JAN 2014

1 Supreme Court Lane Level 6 Singapore 178879
Tel: +65 6332 4388 Fax: +65 6334 4940 Website: http://www.sal.org.sg

<u>**NOTARIAL CERTIFICATE**</u>

TO ALL TO WHOM THESE PRESENTS SHALL COME:

I, **PASCAL BAYLON NETTO, NOTARY PUBLIC,** duly authorised and appointed practising in the Republic of Singapore **DO HEREBY CERTIFY AND ATTEST** that **Ms. TONI SHARON WEBER,** representing herself as **Chairman** of the **Meeting of the Board of Directors** of **PUMA ENERGY IRRAWADDY PTE. LTD.,** a company incorporated in the **Republic of Singapore,** appeared before me and in my presence duly signed the annexed **"MINUTES OF MEETING OF DIRECTORS PURSUANT TO ARTICLE 98 OF THE ARTICLES OF ASSOCIATION OF THE COMPANY Held on 9th day of December 2013"** and that the signature of **Ms. TONI SHARON WEBER** thereto subscribed is in the proper handwriting of the said **Ms. TONI SHARON WEBER.**

IN FAITH AND TESTIMONY WHEREOF I have hereunder subscribed my name and affixed my Seal of Office this 6th day of January In the Year of Our Lord Two Thousand and Fourteen (2014)

NOTARY PUBLIC
Pascal
Baylon Netto
N2013/0197
1 Apr 2013 - 31 Mar 2014
SINGAPORE

PASCAL BAYLON NETTO
NOTARY PUBLIC
SINGAPORE

2013 DL M2822

MINUTES OF MEETING OF DIRECTORS PURSUANT TO ARTICLE 98 OF THE ARTICLES OF ASSOCIATION OF THE COMPANY

Held on: ......09 DEC 2013...... **at 10 Collyer Quay #29-00 Ocean Financial Centre Singapore 049315 at 4:00 p.m.**

Present in person:

Toni Sharon Weber (Chairman)

Present by teleconference:

Robert Michael Jones (Director)
Denis Henri Benjamin Chazarain (Director)
Pierre Rene Xavier Eladari (Director)

(together representing a quorum of the board of directors of the Company (the "**Board**") and in such capacity also referred to as the "**Directors**").

Toni Sharon Weber was elected as Chairman (the "**Chairman**") for the purposes of this meeting.

The meeting was opened by the Chairman who noted that:

a) the meeting had been convened in accordance with Article 98 of the Articles of Association of the Company;
b) a quorum was present; and
c) the meeting could accordingly proceed to business.

The Chairman stated that the meeting had been convened in connection with the following:

ESTABLISHMENT OF A PRIVATE LIMITED COMPANY IN MYANMAR

1. Resolved that a private limited company be registered and established in the Republic of the Union of Myanmar ("**Myanmar**") with the proposed name of Puma Energy Asia Sun Co., Ltd, ("**PE Asia Sun**"), with 80% of the capital owned by the Company and 20% of the capital owned by Asia Sun Energy Company Limited, a Myanmar Company incorporated in the Republic of the Union of Myanmar.

SUBSCRIPTION OF SHARES

2. Resolved that the Company shall subscribe 80% of the investment in PE Asia Sun and Asia Sun Energy Company Limited shall subscribe 20% of the investment in PE Asia Sun.

2013 DL M2822

DIRECTORS OF PE ASIA SUN

3. Resolved that Robert Michael Jones (British citizen) Passport No. 500731043 and Toni Sharon Weber (British Citizen) Passport No. 761309009 be appointed as directors of PE Asia Sun.

PERSONS AUTHORISED TO REPRESENT THE COMPANY AND SIGN ALL DOCUMENTS ON BEHALF OF THE COMPANY IN CONNECTION WITH THE APPLICATION TO MYANMAR INVESTMENT COMMISSION FOR INVESTMENT PERMIT AND THE ESTABLISHMENT OF PE ASIA SUN

4. Resolved that Robert Michael Jones of British citizen with Passport No. 500731043 and/or Toni Sharon Weber of British citizen with Passport No. 761309009 be and are hereby authorized individually to represent the Company and to do all of the following in the name and/or on behalf of the Company in connection with the establishment of PE Asia Sun, as may be appropriate in the circumstances:

   a. Take any and all actions and steps, and sign, execute, deliver, submit and file all applications, information, materials and documents with the Myanmar Investment Commission and the Ministry of National Planning and Economic Development of Myanmar and each other governmental authority or agency in Myanmar, as may be necessary or expedient for application and obtaining Investment Permit and for the establishment of the PE Asia Sun.

   b. Act in all matters and transactions as may be necessary or expedient for the establishment of the PE Asia Sun.

5. Resolved that Robert Michael Jones and/or Toni Sharon Weber be and are hereby further authorized to represent the Company in respect of all acts, dealings, matters and transactions with the PE Asia Sun and in the exercise of all and any rights (including voting rights) relating to the shares held by the Company in PE Asia Sun upon and further to the establishment of PE Asia Sun, and to sign, execute and deliver any and all documents in the name and/or on behalf of the Company, as may be appropriate in the circumstances.

FURTHER ASSURANCE

6. That the Company be authorised to sign, execute, seal and deliver any and all authorization documents, proxy forms and powers of attorney as may be appropriate to give effect to the Resolutions in (4) and (5).

AFFIXING OF COMMON SEAL

7. Resolved that the Company be authorized to affix the Common Seal in accordance with the Company's Memorandum & Articles of Association to any document that may be required to be given under the Company's Common Seal in relation to the Application or to any other documents contemplated by any of the Resolutions herein.

PUMA ENERGY IRRAWADDY PTE. LTD.

2013 DL M2822

CLOSE OF MEETING

There being no further business, the Chairman thanked those in attendance and declared the meeting closed at 4.30 p.m.

Signed by:

Toni Sharon Weber
Chairman

ASIA SUN ENERGY CO.LTD

THE BOARD OF DIRECTORS' RESOLUTION

At the Board of Director's Meeting of Asia Sun Energy Co., Ltd held on 14 August 2013 at No.103, New University Avenue Road, Shwe Thanlwin Condo, Sayar San Quarter, Bahan Township, Yangon Region, The Republic of the Union of Myanmar.

U Win Kyaw Kyaw Aung, Managing Director, took the Chair and the following resolutions were passed:

1. That the new company be formed in the Republic of the Union of Myanmar under the name of Puma Energy Asia Sun Company Limited as 20% owned by our Company and 80% owned by Puma Energy Irrawaddy Pte Ltd.

2. That U Win Kyaw Kyaw Aung be authorized to represent our Company in the formation of the new Company.

3. That U Win Kyaw Kyaw Aung be authorized to represent our Company acting as Director in the new Company.

True extract from the Minutes Book

Kyu Kyu Myint
Director
Asia Sun Energy Co., Ltd.

Asia Sun Energy Co., Ltd.
No.
Date

Win Kyaw Kyaw Aung
Managing Director
Asia Sun Energy Co., Ltd.

Puma Energy Asia Sun Co., Ltd

BOARD OF DIRECTOR LIST

Sr. No.	Company Name and Address	The Present Christian name or names of surnames of Representatives	Nationality, National Registration Card No.	Usual Residential Address	Other Business Occupation	Changes	Number of Shares Taken	Share Ratio
1	Puma Energy Irrawaddy Pte. Ltd. (Incorporated in Singapore IC No. 201220511D)	1. Mr. Robert Michael Jones	British P.P No. 500731043	25 Oriole Cres, Singapore 288618	Businessman	Director	200,000	80%
		2. Ms. Toni Sharon Weber	British P.P. No. 761309009	#40-28 Citylights, 90 Jelicoe Road, Singapore 208749	Businesswoman	Director		
2	Asia Sun Energy Company Limited (Incorporated in Myanmar IC No. 1794/2013-2014)	3. U Win Kyaw Kyaw Aung	Myanmar 13/Ma Sa Ta (Naing) 031876	Building No. A, Room No. 1002, New University Avenue Road, Shwe Than Lwin Condo, Sayar San Quarter, Bahan Township, Yangon Region, The Republic of the Union of Myanmar	Businessman	Director	50,000	20%

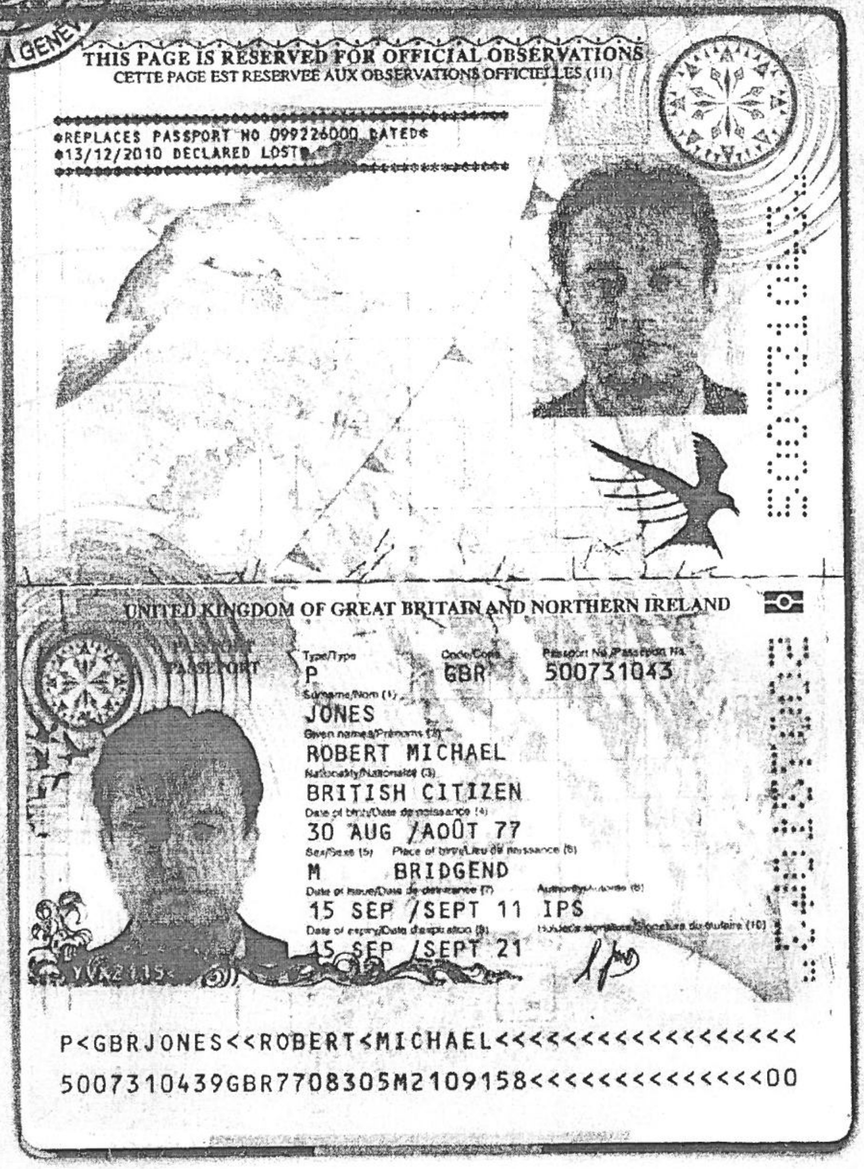
7 AOUT 2012
Fr. 2.50

I, certify that this is a true and exact copy of the original document that I have seen.
Geneva, August 7, 2012

[signature]

BRECHBUHL & RODRIGUEZ
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LAURENT BRECHBUHL * NOTAIRE A GENEVE


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REPLACES PASSPORT NO 099226000 DATED
13/12/2010 DECLARED LOST

UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND

PASSPORT

Type/Type: P
Code/Code: GBR
Passport No./Passeport No.: 500731043
Surname/Nom (1): JONES
Given names/Prénoms (2): ROBERT MICHAEL
Nationality/Nationalité (3): BRITISH CITIZEN
Date of birth/Date de naissance (4): 30 AUG /AOÛT 77
Sex/Sexe (5): M
Place of birth/Lieu de naissance (6): BRIDGEND
Date of issue/Date de délivrance (7): 15 SEP /SEPT 11
Authority/Autorité (8): IPS
Date of expiry/Date d'expiration (9): 15 SEP /SEPT 21
Holder's signature/Signature du titulaire (10)

P<GBRJONES<<ROBERT<MICHAEL<<<<<<<<<<<<<<<<<<<

5007310439GBR7708305M2109158<<<<<<<<<<<<<<<00

UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND

PASSPORT PASSEPORT	Type/Type P	Code/Code GBR	Passport No./Passeport No. 761309009



Surname/Nom (1)
WEBER

Given names/Prénoms (2)
TONI SHARON

Nationality/Nationalité (3)
BRITISH CITIZEN

Date of birth/Date de naissance (4)
26 OCT /OCT 65

Sex/Sexe (5) F
Place of birth/Lieu de naissance (6) EDGWARE

Date of issue/Date de délivrance (7)
12 AUG /AOÛT 10

Authority/Autorité (8)
FCO

Date of expiry/Date d'expiration (9)
12 AUG /AOÛT 20

Holder's signature/Signature du titulaire (10)

P<GBRWEBER<<TONI<SHARON<<<<<<<<<<<<<<<<<<<<<

7613090097GBR6510260F2008125<<<<<<<<<<<<<<08

နိုင်ငံသားစိစစ်ရေးကတ်ပြား



အမှတ် [illegible]

ရက်စွဲ [illegible]

အမည် [illegible]

အဖအမည် [illegible]

မွေးသက္ကရာဇ် [illegible]

လူမျိုး/ဘာသာ [illegible]

အရပ် [illegible]

ထုတ်ပေးသူလက်မှတ် [illegible]

အမှတ်စဉ် A 127862

သက်သေခံကတ်ပြားကိုင်ဆောင်သူလက်မှတ် [illegible]

အမြဲတမ်းနေရပ်လိပ်စာ [illegible]

ထိုးမြဲလက်မှတ်

၁။ ဤကတ်ပြားကို အမြဲဆောင်ထားရမည်။

၂။ ပျောက်ဆုံး၊ ပျက်စီးသည့်အခါ သက်ဆိုင်ရာ ရဲစခန်းနှင့် မြို့နယ်လူဝင်မှုကြီးကြပ်ရေး နှင့် အမျိုးသားမှတ်ပုံတင်ရေးဦးစီးဌာနရုံးသို့ သတင်းပို့ရမည်။

၃။ ဤကတ်ပြားတွင် အသက်( ) နှစ်ပြည့်လျှင် လဲလှယ်ရမည်။ [illegible] အရေးယူခြင်းခံရမည်။

30 AUG 2013
76

ပြည်ထောင်စုသမ္မတမြန်မာနိုင်ငံတော်အတွင်း နိုင်ငံခြားရင်းနှီးမြှုပ်နှံမှု ပြုလုပ်ရန် ကမကထပြုသူ၏ ဆောင်ရွက်ရန် အဆိုပြုချက်

PROPOSAL OF THE PROMOTER TO MAKE FOREIGN INVESTMENT IN THE REPUBLIC OF THE UNION OF MYANMAR

Form (I)

Proposal Form of Investor/Promoter for the investment to be made
in the Republic of the Union of Myanmar

To,
Chairman
Myanmar Investment Commission

Reference No:
Date:

I do apply for the permission to make investment in the Republic of the Union of Myanmar in accordance with the Foreign Investment Law by furnishing the following particulars:-

1. The Investor's or Promoters:-

(a)	Name	Mr. Robert Michael Jones
(b)	Father's Name	Mr. Peter Jones
(c)	ID No./Passport No.	500731043
(d)	Citizenship	British
(e)	Address	
	(i) Address in Myanmar	N/A
	(ii) Residence abroad	25 Oriole Cres, Singapore 288618
(f)	Name of Principle Organization	Puma Energy IrrawaddyPte. Ltd
(g)	Type of Business	Oil & Gas Midstream and Downstream Business
(h)	Principle Company's Address:	1, Marina Boulevard, #28-00, Singapore 018989.

2. If the investment business is formed under Joint Venture, partners':-

(a)	Name	U Win Kyaw Kyaw Aung
(b)	Father's Name	U Maung MaungNyunt
(c)	ID/NRC No./Passport No.	13/Ma Sa Ta (Naing)- 031876
(d)	Citizenship	Myanmar
(e)	Address:	
	(i) Address in Myanmar	Building No. A, Room No. 1002, New University Avenue Road, Shwe Than Lwin Condo, Sayar San Quarter, Bahan Township, Yangon Region, the Republic of the Union of Myanmar.
	(ii) Residence abroad	N/A
(f)	Principle Company	Asia Sun Energy Company Limited
(g)	Type of Business	Trading and service activities
(h)	Principle Company's Address:	Room No. 103, New University Avenue Road, Shwe Than Lwin Condo, Sayar San Quarter, Bahan Township, Yangon Region, the Republic of the Union of Myanmar.

Remarks: The following documents shall be submitted relating to the above paragraph (1) and (2):-
(1) Company Registration Certificate (Copy); [Please refer to Appendix]
(2) National Identification Card (Copy) and Passport (Copy); [Please refer to Appendix]
(3) Evidences about the business and financial conditions of the participants of the proposed investment business; [Please refer to Appendix]

3. Type of proposed investment business:-

(a)	Manufacturing	N/A
(b)	Service Business related with manufacturing	N/A
(c)	Service	N/A
(d)	Others	Construction of jetty facilities and storage tanks providing storage for bitumen and petroleum products

Remarks: Expressions about the nature of business with regard to the above paragraph (3)

4. Type of business organization to be formed:-

(a)	One hundred percent	N/A
(b)	Joint Venture:	
	(i) Foreigner and Citizen	Puma Energy Asia Sun Co., Ltd [Puma Energy Irrawaddy Pte Ltd (foreign company) owned 80% of shares and Asia Sun Energy Co., Ltd (Myanmar company) owned 20% of shares]
	(ii) Foreigner and Government Department/Organization	N/A
(c)	By Contract based:	
	(i) Foreigner and Citizen	N/A
	(ii) Foreigner and Government Department/Organization	N/A

Remarks: The following information shall be submitted relating to the above Paragraph (4):-

(i) Share ratio for the authorized capital from abroad and local, names, citizenships, addresses and occupations of the directors; [Please refer to Appendix]

(ii) Joint Venture Agreement (Draft) and recommendation of Attorney General's Office if the investment is related with the State; [Please refer to Appendix]

(iii) Contract (Agreement) (Draft) [Please refer to Appendix]

5. Information related to Company incorporation

(a)	Authorized Capital	USD 50 million
(b)	Type of Share	Ordinary shares
(c)	Number of Shares	50,000,000 (fifty million)

Remarks: Memorandum of Association and Articles of Association of the Company shall be submitted with regard to above paragraph 5.

6. Particulars relating to Capital of the investment business

		US$
(a)	Amount/Percentage of local capital to be contributed	Equity of $3.4 million (20%)
(b)	Amount/Percentage of Foreign capital to be brought in	Equity of $13.6 million (80%) + Loan of USD69.4million (Note below)
	Total	Equity of $17 million (100%)+ Loan of USD 69.4 million (Note below)

(c)	(Annual/period) of Proposed capital to be contributed	Within 1 year after receiving MIC Permit
(d)	Last date of capital to be contributed	30th September 2015
(e)	Proposed duration of Investment	50 years + 10 years + 10 years
(f)	Commencement date of Construction	Within 3 months after receiving MIC Permit
(g)	Construction Period	18 months after receiving MIC Permit

Remarks: Describe with annexure if it is required for the above Para 6(c)

Note:

USD$17 million within 1 year from obtaining MIC Permit, Permit to Trade, Certificate of Incorporation.

Thereafter, future authorized and paid-up capital may be increased to US$50 million as reflected above in the authorized capital.

At this stage, it is envisaged that PEAS will obtain loans from Puma Energy Funding Ltd incorporated in Bahamas. This may be replaced by third party loan finance (bank financing) if this becomes available on reasonable commercial terms. At this stage, Puma Energy Irrawaddy Pte Ltd envisages the loan amount to be approximately USD$69.4 million. The identities of the potential third party lenders have not been determined at this stage. A draft copy of a relevant loan agreement is attached. Puma Energy Irrawaddy Pte Ltd will inform the MIC when the details of the identities of the third party lenders are available.

7. Detail list of foreign capital to be brought in-

		Foreign Currency (USD)	Loan (USD)	Total (USD)	Equivalent Estimated Kyat (1USD=K. 950)
(a)	Foreign Currency (Type of Currency and Amount)	Equity of 8,600,000	69,400,000	78,000,000	74,100,000,000
(b)	Value of Machinery and Equipments (to enclose detail list)				
(c)	Value of initial Raw Materials and Other Materials (to enclose detail list)				
(d)	Value of Licence, Intellectual Property, Industrial Design, Trade Mark, Patent, etc				
(e)	Value of Technical know-how				
(f)	Others - Contractor fees incurred prior to the incorporation of PEAS (Please refer to Appendix)	5,000,000		5,000,000	K. 4,750,000,000
	Total	13,600,000	69,400,000	83,000,000	78,850,000,000

Remarks: The evidence of permission shall be submitted for the above para 7(d) and (e).

*Note: 1USD=950Kyats

8. Detail list of Local capital to be contributed-

Foreign Loan Total (USD) Equivalent

8. Detail list of Local capital to be contributed-

		Foreign Currency (USD)	Loan (USD)	Total (USD)	Equivalent Estimated Kyat (Million) (1USD=K. 950)
(a)	Foreign Currency	3,400,000	-	3,400,000	K.3,230,000,000
(b)	Value of Machinery and Equipments (to enclose detail list)				
(c)	Rental charges for building/land				
(d)	Cost of building construction				
(e)	Value of Furniture and Assets (to enclose detail list)				
(f)	Value of initial Raw Material (to enclose detail list)				
(g)	Others				
	Total	3,400,000	-	3,400,000	K.3,230,000,000

9. Particulars about the investment business-

(a) Investment Location(s)/Place — Plot 3, Thilawa Port, Thanlyin-Kyauktan Area, Yangon Region, the Republic of the Union of Myanmar.

(b) Type and area requirement for Land or Land and Building

(i) Location — Plot 3, Thilawa Port, Thanlyin-Kyauktan Area, Yangon Region, the Republic of the Union of Myanmar.

(i) Number of Land/Building and area — Thilawa Plot 3 - 37.06 acres

(iii) Owner of the Land

(aa) Name/Company/Department — Myanma Port Authority

(bb) National Registration No.

(cc) Address

(iv) Type of Land — State-Owned

(v) Period of Land lease contract — 50 years + 10 years + 10 years

(vi) Lease Period — From 2014 To 2084

(vii) Lease Rate

(aa) Land — US$ 360,000 per year

(bb) Building

(viii)Ward

(ix) Township — Thanlyin-Kyauktan

(x) State/Region — Yangon Region.

(xi) Lessee

(aa) Name/Name of Company/ Department — Puma Energy Asia Sun Co., Ltd

(bb) Father's Name

(cc) Citizenship

(dd) Passport No.

(ee) Residence Address — Plot 3, Thilawa Port, Thanlyin-Kyauktan Area, Yangon Region, the Republic of the Union of Myanmar.

Remarks: Following particulars shall be submitted relating to above Para 9(b)

(i) to submit land ownership, ownership evidences and land map;

(ii) to submit land lease (Draft) agreement and to submit recommendation of the Union

Attorney General Office if the land is related to the Union;

(c) Requirement of building to be constructed;

(i) Type/No. of Building — See supporting documents

(ii) Area

(d) Product to be produced/service

(1) Name of Product — See supporting documents

(2) Estimate amount to be produced annually

(3) Type of Service — Provide storage services for petroleum for third parties.

(4) Estimated Value of annual Service

Remarks: Detail list shall be enclosed with regard to the above para 9 (d).

(e) Annual requirement of materials/raw materials

Remarks: Relating to the above Para 9 (e) detail list of products in terms of type of products, volume, value, technical specifications for the production shall be listed and enclosed.

(f)	Production System	N/A
(g)	Technical Know-how	N/A
(h)	Sales System	100% local sales
(i)	Annual Fuel Requirement (to prescribe type and quantity)	Phase I: 5,551 m^3 Phase II: 9,636 m^3
(j)	Annual electricity requirement	Phase I: 12,614,400 kWh Phase II: 21,900,000 kWh
(k)	Annual water requirement (to prescribe daily requirement, if any)	3,132 m^3

10. Detail information relating to financial standing-

(a)	Name/Company Name	Puma Energy Irrawaddy Pte Ltd
(b)	National Registration No./Passport No.	201220511D
(c)	Bank Account No.	See Appendix (Bank Statement)

Remarks: To enclose bank recommendation from resident country or annual audit report of the principle company relating to the above Para 10.

11. List of employment to be recruited in the investment business:-

(a)	Employment from local	(41) Nos.	(98%)
(b)	Required Technicians and Executives from abroad	(1) Nos.	(2%)

(To express required period based on the nature of business such as Engineer, QC Buyer, Management, etc.)

Remarks: The following particulars shall be enclosed relating to the above Para 11:-

(i) No. of employee, designation, salary rates, etc;	Schedule - 3
(ii) Plan for Social security and welfare of staff/labour;	Schedule - 9
(iii)family accompany with foreign employee;	

12. Particulars relating to the economic justifications:-

		Foreign Currency	Equivalent Estimated Kyat
(a)	Annual Income	Schedule - 4	
(b)	Annual expenditure	Schedule - 4	
(c)	Annual net profit	Schedule - 4	
(d)	Yearly investments	Schedule - 1	
(e)	Recoupment period	Schedule - 5	
(f)	Other benefits (to enclose detail calculation)	Schedule - 8	

13. Evaluation of environmental impact:-
    (a) Organization for evaluation of environmental impact; ENCA
    (b) Period of the evaluation for environmental impact; 2.5 months
    (c) Compensation programme for environmental impact (environmental draft law)
    (d) Water purification system and waste water treatment system;
    (e) Garbage management system;
    (f) System for storage of chemicals

14. Evaluation on Socio-economic assessments;
    (a) Organization for evaluation of socio-economic assessment; ENCA
    (b) Period of the evaluation for socio-economic assessments; 2.5 months
    (c) No. of volunteers (Corporate Social Responsibility) programme;

15. The above mentioned particulars and documents enclosed herewith this application are true and correct as per my understanding checked by myself and submitted with signed hereunder.

Signature	
Name	Mr. Robert Michael Jones
Occupation	Promoter of the Proposal

PUMA ENERGY ASIA SUN COMPANY LTD

SCHEDULE 1: INVESTMENT PLAN FOR TERMINAL I

Total Thilawa Terminal Cost	84,572	
Terminal Loan Interest	1,817	
TOTAL TERMINAL COST	**86,389**	
		Percentage
Equity for Terminal	17,000	*20%*
Loan for Terminal	69,389	*80%*
TOTAL FUNDING	**86,389**	*100%*

Particulars	Construction Year 2014		
	Equity *	Loan	
Civil/Structure	9,490	-	9,490
Equipment	7,510	3,659	11,169
Pipe	-	4,401	4,401
Electrical	-	2,099	2,099
Instrument	-	1,491	1,491
Jetty Facility	-	15,329	15,329
Land Premium + 10 Year prepaid	-	4,600	4,600
Interest Expense For Terminal Loan	-	235	235
Total Thilawa Terminal	**17,000**	**31,814**	**48,814**

*: Out of $17 millions equity contribution, $5, millions will be c

: - $1.6 million design cost

: - $3.4 million backfilling cost

Summary Sheet

Sq. No.	Description of the Item	Cost (US $)	Remarks	
1	CIVIL / STRUCTURE			
1.1	Design / Supervision / Project Management	$677,223	Imported	6,320,810
1.2	Material Procurement	$16,670,627		
1.3	Erection / Installation / Labor	$2,138,403	Local	10,349,817
1.4	Total	$19,486,253		
2	EQUIPMENT			
2.1	Design / Supervision / Project Management	$733,928	Imported	18,348,200
2.2	Material Procurement	$18,348,200		
2.3	Erection / Installation / Labor	$3,853,122	Local	-
2.4	Total	$22,935,250		
3	PIPING			
3.1	Design / Supervision / Project Management	$915,222	Imported	5,720,136
3.2	Material Procurement (Includes Painting, Insulation and Tracing)	$5,720,136		
3.3	Erection / Installation / Labor	$2,402,457	Local	-
3.4	Total	$9,037,816		
4	ELECTRICAL			
4.1	Design / Supervision / Project Management	$309,837	Imported	2,816,700
4.2	Material Procurement	$2,816,700		
4.3	Erection / Installation / Labor	$1,183,014	Local	
4.4	Total	$4,309,551		
5	INSTRUMENT			
5.1	Design / Supervision / Project Management	$340,073	Imported	2,267,150
5.2	Material Procurement	$2,267,150		
5.3	Erection / Installation / Labor	$453,430	Local	-
5.4	Total	$3,060,653		
6	JETTY FACILITIES			
6.1	Design / Supervision / Project Management	$1,750,000	Imported	11,909,698
6.2	Material Procurement	$14,653,980		
6.3	Erection / Installation / Labor	$4,738,806	Local	2,744,282
6.4	Total	$21,142,786		
	TOTAL			
	DESIGN / SUPERVISION / PROJECT MANAGEMENT	**$4,726,283**		
	MATERIAL PROCUREMENT	**$60,476,793**		
	ERECTION / INSTALLATION / LABOR	**$14,769,232**		
	GRAND TOTAL:	**$79,972,308**		

Local and Imported Material Breakdown

Sq. No.	Source	Cost (US $)		Remarks
1	**Imported**	**$47,382,694**		
2	**Local**	**$13,094,099**		

		Phase 1
1	CIVIL / STRUCTURE	$19,486
2	EQUIPMENT	$22,935
3	PIPING	$9,038
4	ELECTRICAL	$4,310
5	INSTRUMENT	$3,061
6	JETTY FACILITIES	$21,143
	TOTAL	$79,972

Local and Imported Civil / Structural BOQ (LOCAL)

Sq. No.	Brief Material Description	Length m	Width m	Thickness m	Phase I No.s	Phase I Quantity	Phase II No.s	Phase II Quantity	Unit	Total Weight/ Qty	Unit Price US $	Total Price US $	Remarks
1	**Bitumen/HFO tank**	D	23		3							**$417,981**	
1.1	Excavation			0.65		3732.998954		0	m^3	3732.998954	$8	$29,864	Local
1.3	Concrete Pads			0.6		917.4455858		0	m^3	917.4455858	$350	$321,106	Local
1.5	Compacted Sand, Gravel material					945.7953179		0	m^3	945.7953179	$6	$5,675	Local
1.8	Concrete RC Bund wall & foundation				320	960		0	m^3	960	$95	$91,200	Local
2a	**Gasoil/Gasline tank**	D	32		3		3					**$1,446,112**	
2a.1	Excavation			0.65		3757.645017		1627.645017	m^3	5385.290033	$8	$43,082	Local
2a.3	Concrete Pads			0.6		1683.397291		1683.397291	m^3	3366.794581	$350	$1,178,378	Local
2a.5	Compacted Sand, Gravel material					1858.490816		1858.490816	m^3	3716.981631	$6	$22,302	Local
2a.8	Concrete RC Bund wall & foundation				710	2130			m^3	2130	$95	$202,350	Local
2b	**JET Fuel Tanks**	D	23		3							**$447,626**	
2b.1	Excavation			0.65		1959.998954		0	m^3	1959.998954	$8	$15,680	Local
2b.3	Concrete Pads			0.6		917.4455858		0	m^3	917.4455858	$350	$321,106	Local
2b.5	Compacted Sand, Gravel material					945.7953179		0	m^3	945.7953179	$6	$5,675	Local
.8	Concrete RC Bund wall & foundation				369	1107			m^3	1107	$95	$105,165	Local
3	**White Products JET fuel pump station /manifold**	23	4.9									**$31,145**	
3.1	Excavation			0.7		78.89			m^3	78.89	$8	$631	Local
3.3	Concrete on ground floor			0.75		84.525			m^3	84.525	$350	$29,584	Local
3.5	200mm THK crushed stone			0.15		16.905			m^3	16.905	$55	$930	Local
4	**Bitumen pumping station**	15	6									**$24,872**	
4.1	Excavation			0.7		63			m^3	63	$8	$504	Local
4.3	Concrete on ground floor			0.75		67.5			m^3	67.5	$350	$23,625	Local

Local and Imported Civil / Structural BOQ (LOCAL)

Sq. No.	Brief Material Description	Length m	Width m	Thickness m	Phase I No.s	Phase I Quantity	Phase II No.s	Phase II Quantity	Unit	Total Weight/ Qty	Unit Price US $	Total Price US $	Remarks
4.5	200mm THK crushed stone			0.15		13.5			m^3	13.5	$55	$743	Local
	Bitumen truck loading bays	**20**	**11**									**$58,982**	
5.1	Excavation			0.5		154			m^3	154	$8	$1,232	Local
5.2	Concrete on ground floor			0.75		165			m^3	165	$350	$57,750	Local
6	**White Product & Jet fuel truck loading bays**	**20**	**31**									**$166,222**	
6.1	Excavation			0.5		434			m^3	434	$8	$3,472	Local
6.2	Concrete on ground floor			0.75		465			m^3	465	$350	$162,750	Local
7	**Office building**	**16**	**24**									**$193,376**	
7.1	Excavation			1.5		52			m^3	52	$8	$416	Local
7.2	Concrete on ground floor			0.75		288			m^3	288	$350	$100,800	Local
7.3	Concrete on roof			0.75		288			m^3	288	$320	$92,160	Local
7.5	Foundations									0	$350	$0	Local
8	**Substation building**	**25**	**13**									**$300,169**	
8.1	Excavation			1.5		44.5			m^3	44.5	$8	$356	Local
8.2	Concrete on ground floor			1.2		390			m^3	390	$350	$136,500	Local
	Concrete on floor at EL2000			0.75		243.75			m^3	243.75	$350	$85,313	Local
8.4	Concrete on roof			0.75		243.75			m^3	243.75	$320	$78,000	Local
9	**Fire fighting pump station**	**25**	**16**									**$173,540**	
9.1	Excavation			0.7		280			m^3	280	$8	$2,240	Local
9.2	Concrete on ground floor			1.2		480			m^3	480	$350	$168,000	Local
9.4	200mm THK crushed stone			0.15		60			m^3	60	$55	$3,300	Local
10	**Fire fighting tanks and foam system**	**D**	**17**		**1**							**$64,933**	
10.1	Excavation			0.65		158.1352078			m^3	158.1352078	$8	$1,265	Local

Local and Imported Civil / Structural BOQ (LOCAL)

Sq. No.	Brief Material Description	Length m	Width m	Thickness m	Phase I No.s	Phase I Quantity	Phase II No.s	Phase II Quantity	Unit	Total Weight/ Qty	Unit Price US $	Total Price US $	Remarks
10.3	Concrete Pads			0.6		178.0152061			m^3	178.0152061	$350	$62,305	Local
10.5	Compacted Sand, Gravel material					227.0837418			m^3	227.0837418	$6	$1,363	Local
10.8	Concrete RC Bund wall & foundation									0		$0	Local
11	**Generators**	**9.5**	**2.7**		**2**							**$13,754**	
11.1	Excavation			0.7		35.91			m^3	35.91	$8	$287	Local
11.2	Concrete on ground floor			0.75		38.475			m^3	38.475	$350	$13,466	Local
12	**Waster water station - Oil seperator**	**20**	**13**	**4.5**								**$241,012**	
12.1	Excavation					2882.475			m^3	2882.475	$8	$23,060	Local
12.2	Sand or gravel material backfill					1536.975			m^3	1536.975	$6	$9,222	Local
12.3	Base concrete slab			1		260			m^3	260	$350	$91,000	Local
12.4	Retaining wall			0.6		178.2			m^3	178.2	$150	$26,730	Local
12.5	Top concrete slab			1		260			m^3	260	$350	$91,000	Local
13	**Warehouse near substation**	**10**	**10**									**$26,650**	
13.1	Excavation			0.5		50			m^3	50	$8	$400	Local
13.2	Concrete on ground floor			0.75		75			m^3	75	$350	$26,250	Local
14	**Boiler unit (hot oil shelter)**	**20**	**16**									**$86,560**	
14.1	Excavation			1		320			m^3	320	$8	$2,560	Local
14.2	Concrete on ground floor			0.75		240			m^3	240	$350	$84,000	Local
15	**Air compressor station**	**20**	**13**									**$69,290**	
15.1	Excavation			0.5		130			m^3	130	$8	$1,040	Local
15.2	Concrete on ground floor			0.75		195			m^3	195	$350	$68,250	Local
16	**Land Reclamation**											**$4,625,000**	
16.1	Land Reclamation					450000			m^3	450000	$3	$1,125,000	Local
16.2	Earthwork											$3,500,000	Local

Local and Imported Civil / Structural BOQ (LOCAL)

Sq. No.	Brief Material Description	Length m	Width m	Thickness m	Phase I No.s	Phase I Quantity	Phase II No.s	Phase II Quantity	Unit	Total Weight/ Qty	Unit Price US $	Total Price US $	Remarks
17	**Guard Houses**	**4.5**	**4.5**		**3**							**$30,770**	
17.1	Excavation			0.5		30.375			m^3	30.375	$8	$243	Local
17.2	Concrete on ground floor			0.75		45.5625			m^3	45.5625	$350	$15,947	Local
17.3	Concrete on roof			0.75		45.5625			m^3	45.5625	$320	$14,580	Local
18	**Ticket House**	**4.5**	**4.5**		**2**		**1**					**$30,770**	
18.1	Excavation			0.5		20.25		10.125	m^3	30.375	$8	$243	Local
18.2	Concrete on ground floor			0.75		30.375		15.1875	m^3	45.5625	$350	$15,947	Local
18.3	Concrete on roof			0.75		30.375		15.1875	m^3	45.5625	$320	$14,580	Local
19	**Pipe Rack and pipe sleeper**											**$592,896**	
19.1	Excavation					1509.03		389.16	m^3	1898.19	$8	$15,186	Local
19.2	Pile Rack foundaiton concrete	4	3	1.2	8	115.2	6	86.4	m^3	201.6	$350	$70,560	Local
19.3	Pile sleeper concrete	4	3	0.75	133	1197	28	252	m^3	1449	$350	$507,150	Local
20	**Road and fencing**											**$1,008,160**	
20.1	road with 5m width	1965	5			9825			m^2	9825	$30	$294,750	Local
20.2	road with 6m width	63.4	6			380.34			m^2	380.34	$30	$11,410	Local
[illegible]3	road with 10m width	760	10			7600			m^2	7600	$65	$494,000	Local
20.4	road with 16m width	200	16			3200			m^2	3200	$65	$208,000	Local
21	**Storm water Drainage**	**5976.78**				**5976.78**			**m**			**$300,000**	**Local**

LOCAL MATERIAL TOTAL: $10,349,817

Local and Imported Civil / Structural BOQ (IMPORT)

Sq. No.	Brief Material Description	Length m	Width m	Thickness m	Phase I No.s	Phase I Quantity	Phase II No.s	Phase II Quantity	Unit	Total Weight/ Qty	Unit Price US $	Total Price US $	Remarks
1	**Bitumen/HFO tank**	**D**	**23**		**3**							**$924,325**	
1.2	driven Piles	40			210	7560		0	m	7560	$90	$680,400	Imported
1.4	Bitumen Insulation layer					1182.244147		0	m^2	1182.244147	$7	$8,598	Imported
1.6	PE Cushion					1182.244147		0	m^2	1182.244147	$12	$14,187	Imported
1.7	Geo synthetic clay liner					2842.85616		1280	m^2	4122.85616	$3	$12,369	Imported
1.9	Rebar					186		0	t	186	$652	$121,272	Imported
1.10	Steel staircase & platform				8	3.5		0	t	3.5	$25,000	$87,500	Imported
2a	**Gasoil/Gasline tank**	**D**	**32**		**3**		**3**					**$2,047,222**	
2a.2	driven Piles	40			440	16240		0	m	16240	$90	$1,461,600	Imported
2a.4	Bitumen Insulation layer					2323.11352		2323.11352	m^2	4646.227039	$7	$32,524	Imported
2a.6	PE Cushion					2323.11352		2323.11352	m^2	4646.227039	$12	$55,755	Imported
2a.7	Geo synthetic clay liner					9739.60192			m^2	9739.60192	$3	$27,326	Imported
2a.9	Rebar					380		168.3397291	t	548.3397291	$652	$357,518	Imported
2a.10	Steel platform				10	4.5			t	4.5	$25,000	$112,500	Imported
2b	**JET Fuel Tanks**	**D**	**23**		**3**							**$918,843**	
2b.2	driven Piles	40			210	7560		0	m	7560	$90	$680,400	Imported
2b.4	Bitumen Insulation layer					1182.244147		0	m^2	1182.244147	$7	$8,276	Imported
2b.6	PE Cushion					1182.244147		0	m^2	1182.244147	$12	$14,187	Imported
2b.7	Geo synthetic clay liner					3526.85616			m^2	3526.85616	$3	$10,581	Imported
2b.9	Rebar					200		0	t	200	$652	$130,400	Imported
2b.10	Steel platform				7	3			t	3	$25,000	$75,000	Imported
3	**White Products JET fuel pump station /manifold**	23	4.9									**$30,743**	
3.2	driven Piles	40			8	320			m	320	$90	$28,800	Imported
3.4	Rebar					2.98			t	2.98	$652	$1,943	Imported
4	**Bitumen pumping station**	**15**	**6**									**$2,914**	
4.4	Rebar					4.47			t	4.47	$652	$2,914	Imported

Local and Imported Civil / Structural BOQ (IMPORT)

Sq. No.	Brief Material Description	Length m	Width m	Thickness m	Phase I No.s	Phase I Quantity	Phase II No.s	Phase II Quantity	Unit	Total Weight/ Qty	Unit Price US $	Total Price US $	Remarks
5	**Bitumen truck loading bays**	**20**	**11**									**$145,976**	
5.3	Steel column			10	8	7			t	7	$2,500	$17,500	Imported
5.4	Steel platform	20	1.65		1	3			t	3	$2,500	$7,500	Imported
5.5	Steel roof					45			t	45	$2,500	$112,500	Imported
5.6	Rebar					13			t	13	$652	$8,476	Imported
6	White Product & Jet fuel truck loading bays	20	31									$281,237	
6.3	Steel column			10	16	15			t	15	$2,500	$37,500	Imported
6.4	Steel platform	20	1.65		3	9			t	9	$2,500	$22,500	Imported
6.5	Steel roof					85			t	85	$2,500	$212,500	Imported
6.6	Rebar					13.4			t	13.4	$652	$8,737	Imported
7	**Office building**	**16**	**24**									**$82,807**	
7.4	Brick / partition wall	158.4	4			633.6			m^2	633.6	$120	$76,032	Imported
7.6	Rebar					5.5			t	5.5	$650	$3,575	Imported
7.7	Doors & windows					8				8	$400	$3,200	Imported
8	**Substation building**	**25**	**13**									**$149,134**	
8.5	Brick / partition wall	91	3			273			m^2	273	$130	$35,490	Imported
8.6	driven Piles	40			33	1200			m	1200	$90	$108,000	Imported
8.7	Rebar					5.589			t	5.589	$652	$3,644	Imported
8.8	Doors & windows					4				4	$500	$2,000	Imported
9	**Fire fighting pump station**	**25**	**16**									**$2,914**	
9.3	Rebar					4.47			t	4.47	$652	$2,914	Imported
10	**Fire fighting tanks and foam system**	**D**	**17**		**1**							**$63,099**	
10.2	driven Piles	30			22	600			m	600	$90	$54,000	Imported
10.4	Bitumen insulation layer					211.24069			m^2	211.24069	$7	$1,479	Imported
10.6	PE Cushion					211.24069			m^2	211.24069	$12	$2,535	Imported
10.7	Geo synthetic clay liner									0		$0	Imported
10.9	Rebar					7.8			t	7.8	$652	$5,086	Imported

Local and Imported Civil / Structural BOQ (IMPORT)

Sq. No.	Brief Material Description	Length m	Width m	Thickness m	Phase I No.s	Phase I Quantity	Phase II No.s	Phase II Quantity	Unit	Total Weight/ Qty	Unit Price US $	Total Price US $	Remarks
10.1	Steel platform									0		$0	Imported
11	Generators	9.5	2.7		2							$1,043	
11.3	Rebar					1.6			t	1.6	$652	$1,043	Imported
12	Waster water station - Oil seperator	20	13	4.5								$173,699	
12.6	Rebar					1.49			t	1.49	$652	$971	Imported
12.7	Ladders					1			No.s	1	$5,000	$5,000	Imported
12.8	Handrail					66			m	66	$2,000	$132,000	Imported
12.9	Flow distrobution baffle	2.03	2.2		8	35.728			m^2	35.728	$1,000	$35,728	Imported
13	Warehouse near substation	10	10									$67,698	
13.3	Steel column			6	8	4			t	4	$2,500	$10,000	Imported
13.4	Steel roof					9			t	9	$2,500	$22,500	Imported
13.5	Brick wall	47	6			245.97			m^2	245.97	$120	$29,516	Imported
13.6	Rebar					3.5			t	3.5	$652	$2,282	Imported
13.7	a) 3500x3500 heavy duty alum door					1			No.s	1	$600	$600	Imported
13.8	b) 900x2100 heavy duty alum door					1			No.s	1	$900	$900	Imported
13.9	c) internal door					1			No.s	1	$400	$400	Imported
13.1	Windows					5			No.s	5	$300	$1,500	Imported
14	Boiler unit (hot oil shelter)	20	16									$205,004	
14.3	Steel column			3	15	5			t	5	$2,500	$12,500	Imported
14.4	Steel roof					31			t	31	$2,500	$77,500	Imported
14.5	Brick wall	72	4			288			m^2	288	$120	$34,560	Imported
14.6	Steel side cladding	72	3			216			m^2	216	$100	$21,600	Imported
14.7	Rebar					5.589			t	5.589	$652	$3,644	Imported
14.8	Windows & doors					4			No.s	4	$300	$1,200	Imported
14.9	driven Piles	40			15	600			m	600	$90	$54,000	Imported
15	Air compressor station	20	13									$86,868	
15.3	Steel column			6	15	8		9.09	t	8	$2,500	$20,000	Imported
15.4	Steel roof					25			t	25	$2,500	$62,500	Imported

Local and Imported Civil / Structural BOQ (IMPORT)

Sq. No.	Brief Material Description	Length m	Width m	Thickness m	Phase I No.s	Phase I Quantity	Phase II No.s	Phase II Quantity	Unit	Total Weight/ Qty	Unit Price US $	Total Price US $	Remarks
15.5	Rebar					6.7			t	6.7	$652	$4,368	Imported
17	Guard Houses	4.5	4.5		3							$2,048	
17.4	Rebar					1.3			t	1.3	$652	$848	Imported
17.5	Doors & windows					6			No.s	6	$200	$1,200	Imported
18	Ticket House	4.5	4.5		2		1					$3,106	
18.4	Rebar					0.5		3.0375	t	3.5375	$652	$2,306	Imported
18.5	Doors & windows					[illegible]		2	No.s	4	$200	$800	Imported
19	Pipe Rack and pipe sleeper											$330,528	
19.4	Rebar					100.2		33.84	t	134.04	$652	$87,394	Imported
19.5	Steel Pipe Rack			8	4	30	5	40	t	70	$3,473.34	$243,134	Imported
20	**Road and fencing**											**$593,750**	
20.5	Fence Material	1900	2.5			4750			m^2	4750	$125	$593,750	Imported
22	**Waster water Network**	**1640**				**1640**		**560**	**m**			**$150,000**	**Imported**
23	**Structural Members of the Tanks**											**$57,850**	
23.1	Structural members, such as I beams, U beams, Angles, Rods, Gratings, Bolts and Nuts...					75		14	t	89	$650	$57,850	Imported

Rebar	944	ton
Steel Column, Platform, Roof etc	287	ton
Driven Pile	34080	meter

IMPORTED MATERIAL TOTAL: $6,320,810

Imported Equipment BOQ

NO	TAG NO.	SERVICE	PRODUCT	TYPE	Qty	Volume (m^3)	Weight (T)	Capacity (m^3/hr)	Diff.Press./ Head mliq	Design Temp (°C)	MATERIAL	Motor Name Plate (KW) Note 1	DIA (m)	Height (m)	Unit Price US $	Total Price US $	REMARKS
PRODUCT PUMPS																	
1	P-0101	Bitumen Ship Loading Pump	Bitumen	PD Pump	1			200	60	200	DI	90.0			$80,000	$80,000	Includes the pump electrical motor.
2	P-0103	Bitumen Truck Loading Pump	Bitumen	PD Pump	1			80	60	200	DI	30.0			$48,500	$48,500	Includes the pump electrical motor.
3	P-0104	Bitumen Truck Loading Pump	Bitumen	PD Pump	1			80	60	200	DI	30.0			$48,500	$48,500	Includes the pump electrical motor.
4	P-0201	Gasoil Ship Loading Pump	Gasoil	Centrifugal Pump	1			350	80	60	DI	75.0			$47,500	$47,500	Includes the pump electrical motor.
5	P-0203	Gasoline Ship Loading Pump	Gasoline	Centrifugal Pump	1			350	80	60	DI	75.0			$47,500	$47,500	Includes the pump electrical motor.
6	P-0205	Gasoline Truck Loading Pump	Gasoline	Centrifugal Pump	1			90	60	60	DI	30.0			$28,500	$28,500	Includes the pump electrical motor.
7	P-0206	Gasoline Truck Loading Pump	Gasoline	Centrifugal Pump	1			90	60	60	DI	30.0			$28,500	$28,500	Includes the pump electrical motor.
8	P-0208	Gasoil Truck Loading Pump	Gasoil	Centrifugal Pump	1			90	60	60	DI	30.0			$28,500	$28,500	Includes the pump electrical motor.
9	P-0209	Gasoil Truck Loading Pump	Gasoil	Centrifugal Pump	1			90	60	60	DI	30.0			$28,500	$28,500	Includes the pump electrical motor.
10	P-0401	Fire Water Pump	Fire Water	Diesel Pump	1			540	80	60	DI				$140,000	$140,000	Includes the pump electrical motor.
11	P-0409	Fire Water Pump	Fire Water	Diesel Pump	1			540	80	60	DI				$140,000	$140,000	Includes the pump electrical motor.
12	P-0402	Fire Water Jockey Pump	Fire Water	Centrifugal Pump	1			108	80	60	DI	30.0			$95,000	$95,000	Includes the pump electrical motor.
13	P-0403	Fire Water Jockey Pump	Fire Water	Centrifugal Pump	1			108	80	60	DI	30.0			$95,000	$95,000	Includes the pump electrical motor.
14	P-0404	Fire Foam Pump	Foam	PD Pump	1			60	80	60	DI	30.0			$83,500	$83,500	Includes the pump electrical motor.
15	P-0405	Fire Foam Pump	Foam	Rotary Gear	1			60	80	60	Bronze	30.0			$83,500	$83,500	Includes the pump electrical motor.
16	P-0406	Fire Foam Pump	Foam	Rotary Gear	1			60	80	60	Bronze	30.0			$83,500	$83,500	Includes the pump electrical motor.
17	P-0407	Portable Water Pump	Portable Water	Centrifugal Pump	1			10	60	60	DI	3.0			$9,500	$9,500	Includes the pump electrical motor.
18	P-0408	Portable Water Pump	Portable Water	Centrifugal Pump	1			10	60	60	DI	3.0			$9,500	$9,500	Includes the pump electrical motor.
19	P-0601	Jet Fuel Truck Loading Pump	Jet Fuel	Centrifugal Pump	1			90	60	60	DI	30.0			$28,500	$28,500	Includes the pump electrical motor.
20	P-0603	Jet Fuel Truck Loading Pump	Jet Fuel	Centrifugal Pump	1			350	80	60	DI	75.0			$47,500	$47,500	Includes the pump electrical motor.
21	PH-0105	Hot Oil Pump	Hot Oil	Centrifugal Pump	1			300	76	300	CS	90.0			$90,000	$90,000	Includes the pump electrical motor.
22	PH-0106	Hot Oil Pump	Hot Oil	Centrifugal Pump	1			300	76	300	CS	90.0			$90,000	$90,000	Includes the pump electrical motor.

Imported Equipment BOQ

NO	TAG NO.	SERVICE	PRODUCT	TYPE	Qty	Volume (m^3)	Weight (T)	Capacity (m³/hr)	Diff.Press./ Head mliq	Design Temp (°C)	MATERIAL	Motor Name Plate (KW) Note 1	DIA (m)	Height (m)	Unit Price US $	Total Price US $	REMARKS
23	PH-0107	Hot Oil Pump	Hot Oil	Centrifugal Pump	1			300	76	300	CS	90.0			$90,000	$90,000	Includes the pump electrical motor.
24	PH-0108	Hot Oil Pump	Hot Oil	Centrifugal Pump	1			300	76	300	CS	90.0			$90,000	$90,000	Includes the pump electrical motor.
Loading Arms																	
25	TLA-0101	Bitumen Truck Loading System	Bitumen	Top Loading	1			80	-	200	CS				$195,000	$195,000	This package includes Flow Meter, Control and shut off valves, strainer and air eliminator, loading arm and insulation
26	TLA-0102	Bitumen Truck Loading System	Bitumen	Top Loading	1			80	-	200	CS				$195,000	$195,000	This package includes Flow Meter, Control and shut off valves, strainer and air eliminator and insulation
27	TLA-0201	Gasoline Truck Loading System	Gasoline	Top Loading	1			180	-	60	Aluminium				$148,500	$148,500	This package includes Flow Meter, Control and shut off valves, strainer and air eliminator, loading arm
28	TLA-0202	Gasoil Truck Loading System	Gasoil	Top Loading	1			180	-	60	Aluminium				$148,500	$148,500	This package includes Flow Meter, Control and shut off valves, strainer and air eliminator, loading arm
29	TLA-0203	Gasoline Truck Loading System	Gasoline	Top Loading	1			180	-	60	Aluminium				$148,500	$148,500	This package includes Flow Meter, Control and shut off valves, strainer and air eliminator, loading arm
30	TLA-0204	Gasoil Truck Loading System	Gasoil	Top Loading	1			180	-	60	Aluminium				$148,500	$148,500	This package includes Flow Meter, Control and shut off valves, strainer and air eliminator, loading arm
31	TLA-0601	Jet Fuel Truck Loading System	Jet Fuel	Top Loading	1			180	-	60	Aluminium				$148,500	$148,500	This package includes Flow Meter, Control and shut off valves, strainer and air eliminator, loading arm
32	MLH-0501	Gasoil Marine Loading Hose	Gasoil		4			1000	-		CS				$10,000	$40,000	
33	MLH-0502	Gasoil Marine Loading Hose	Gasoil		4			1000	-		CS				$10,000	$40,000	
34	MLA-0503	Gasoil Marine Loading Arm	Gasoil	Hydraulic	1			1000	-		CS				$250,000	$250,000	
35	MLA-0504	Gasoil Marine Loading Arm	Gasoil	Hydraulic	1			1000	-		CS				$250,000	$250,000	
36	MLH-0505	Gasoil Marine Loading Hose	Gasoil		4			650	-		CS				$10,000	$40,000	
37	MLH-0506	Gasoline Marine Loading Hose	Gasoline		4			650	-		CS				$10,000	$40,000	
38	MLH-0507	Bitumen Marine Loading Hose	Bitumen		4			1000	-		CS				$10,000	$40,000	
39	MLH-0508	Bitumen Marine Loading Hose	Bitumen		4			1000	-		CS				$10,000	$40,000	
40	MLH-0509	Bitumen Marine Loading Hose	Bitumen		4			650	-		CS				$10,000	$40,000	
41	MLH-0508	Bitumen Marine Loading Hose	Bitumen		4			1000	-		CS				$10,000	$40,000	
42	MLH-0509	Bitumen Marine Loading Hose	Bitumen		4			650	-		CS				$10,000	$40,000	
43	MLH-0510	Jetfuel Marine Loading Hose	Jet Fuel		1			1000	-		CS				$10,000	$10,000	
44	MLA-0511	Jetfuel Marine Loading Arm	Jet Fuel	Hydraulic	1			1000	-		CS				$250,000	$250,000	
TANKS/VESSELS																	
45	T-0101	BITUMEN TANK	DRT	API 650	1	7000.0	169		ATM	200.0	CS		23.0	17.0	$845,000	$845,000	STEEL PLATES (6 to 26mm)

Imported Equipment BOQ

NO	TAG NO.	SERVICE	PRODUCT	TYPE	Qty	Volume (m^3)	Weight (T)	Capacity (m³/hr)	Diff.Press./ Head mliq	Design Temp (°C)	MATERIAL	Motor Name Plate (KW) Note 1	DIA (m)	Height (m)	Unit Price US $	Total Price US $	REMARKS
46	T-0102	BITUMEN TANK	DRT	API 650	1	7000.0	169		ATM	200.0	CS		23.0	17.0	$845,000	$845,000	STEEL PLATES (6 to 26mm)
47	T-0103	BITUMEN TANK	DRT	API 650	1	7000.0	169		ATM	200.0	CS		23.0	17.0	$845,000	$845,000	STEEL PLATES (6 to 26mm)
48	T-0201	GASOIL/GASOLINE TANK	DRT+IFR	API 650	1	12000.0	273		ATM	60.0	CS		32.0	17.0	$923,000	$923,000	STEEL PLATES (6 to 26mm)
49	T-0202	GASOIL/GASOLINE TANK	DRT+IFR	API 650	1	12000.0	273		ATM	60.0	CS		32.0	17.0	$923,000	$923,000	STEEL PLATES (6 to 26mm)
50	T-0203	GASOIL/GASOLINE TANK	DRT+IFR	API 650	1	12000.0	273		ATM	60.0	CS		32.0	17.0	$923,000	$923,000	STEEL PLATES (6 to 26mm)
51	T-0204	GASOIL/GASOLINE DAY TANK	DRT+IFR	API 650	1	5000.0	149		ATM	60.0	CS		21.0	17.0	$745,000	$745,000	STEEL PLATES (6 to 26mm)
52	T-0205	GASOIL/GASOLINE DAY TANK	DRT+IFR	API 650	1	5000.0	149		ATM	60.0	CS		21.0	17.0	$745,000	$745,000	STEEL PLATES (6 to 26mm)
53	T-020X	GASOIL/GASOLINE DAY TANK	DRT+IFR	API 650	1	12000.0	273		ATM	60.0	CS		32.0	17.0	$923,000	$923,000	STEEL PLATES (6 to 26mm)
54	T-020X	GASOIL/GASOLINE DAY TANK	DRT+IFR	API 650	1	12000.0	273		ATM	60.0	CS		32.0	17.0	$923,000	$923,000	STEEL PLATES (6 to 26mm)
55	T-020X	GASOIL/GASOLINE DAY TANK	DRT+IFR	API 650	1	12000.0	273		ATM	60.0	CS		32.0	17.0	$923,000	$923,000	STEEL PLATES (6 to 26mm)
56	T-0601	JET FUEL TANK	DRT	API 650	1	7000.0	112		ATM	60.0	CS		23.0	18.0	$560,000	$560,000	STEEL PLATES (6 to 26mm)
57	T-0602	JET FUEL TANK	DRT	API 650	1	7000.0	112		ATM	60.0	CS		23.0	18.0	$560,000	$560,000	STEEL PLATES (6 to 26mm)
58	T-0603	JET FUEL TANK	DRT	API 650	1	7000.0	112		ATM	60.0	CS		23.0	18.0	$560,000	$560,000	STEEL PLATES (6 to 26mm)
59	T-0401	FIRE WATER TANK	DRT	API 650	1	4000.0	130		ATM	60.0	CS		19.0	17.0	$80,000	$80,000	STEEL PLATES (6 to 26mm)
60	XXXX	Floating Suction Nozzle	NA	API	4	NA	1		ATM	60.0	SS				$20,000	$80,000	
61	T-0402	FOAM TANK	Horizontal Drum	ASME RTP-1	1	60.0			10M	60.0	FRP				$56,000	$56,000	
62	V-0401	PLANT AIR RECEIVER	Vertical	ASME SEC	1	45.0			10.0	60.0	CS + Internal Coating				$1,000	$1,000	
63	V-0402	INSTRUMENT AIR RECEIVER	Vertical	ASME SEC	1	45.0			10.0	60.0	CS + Internal Coating				$1,000	$1,000	
64	V-0101	HOT OIL EXPANSION TANK		API 650	1	15.0			ATM		CS				$50,000	$50,000	
65	V-0102	HOT OIL TANK		API 650	1	50.0			ATM		CS				$50,000	$50,000	
66	V-0103	FUEL OIL TANK		API 650	1	150.0			ATM		CS				$50,000	$50,000	
67	T-0403	POTABLE WATER TANK			1	10.0			ATM	60.0	FRP				$20,000	$20,000	
68	V-0404	WATER PRESSURE TANK	Bladder Tank		1	1.0			10.0		CS				$28,000	$28,000	
69	V-0405	WATER PRESSURE TANK	Bladder Tank		1	1.0			10.0		CS				$28,000	$28,000	
Package Equipment																	
70	XXX	CPI UNIT	OILY WASTE WATER	PARTIALY U/G & A/G	1							30.0			$300,000	$300,000	
71	C-0401	Air Compressor	AIR	Rotary Oil Injected Screw Compressor	1										$14,000	$14,000	100M^3/Bar, 7.5Barg
72	C-0402	Air Compressor	AIR	Rotary Oil Injected Screw Compressor	1										$14,000	$14,000	100M^3/Bar, 7.5Barg
73	D-0401	Air Dryer	AIR	Dessicant Type	1										$3,000	$3,000	100M^3/Bar, 7.0Barg, Dew point -20DegC
74	D-0402	Air Dryer	AIR	Dessicant Type	1										$3,000	$3,000	100M^3/Bar, 7.0Barg, Dew point -20DegC
75	B-0101	BOILER	OIL	TBA	1							1500			$580,000	$580,000	Includes instrumentation, burner, stack, relevant RV valves and expansion joints (TBC)
76	B-0102	BOILER	OIL	TBA	1							1500			$580,000	$580,000	Includes instrumentation, burner, stack, relevant RV valves and expansion joints (TBC)

Imported Equipment BOQ

NO	TAG NO.	SERVICE	PRODUCT	TYPE	Qty	Volume (m^3)	Weight (T)	Capacity (m³/hr)	Diff.Press./ Head mliq	Design Temp (°C)	MATERIAL	Motor Name Plate (KW) Note 1	DIA (m)	Height (m)	Unit Price US $	Total Price US $	REMARKS
77	XXX	Bitumen Weigh Bridge	-		4										$100,000	$400,000	This package includes relevant preset and instrumentation to communicate with plant PLC
78	XXX	Open Yard Weigh Bridge	-		2										$200,000	$400,000	This package includes relevant preset and instrumentation to communicate with plant PLC
79	XXX	Overhead crane in the Shertered warehouse	-		2										$120,000	$240,000	This package includes relevant ladders and access platforms, electrical motors, cables and control interface.
HVAC																	
80	XXX	OFFICE BUILDING HVAC	-	VRV SYSTEM	1 LOT										$60,000	$60,000	
81	XXX	ROOM WITH VFD PANEL HVAC	-	PACKAGE	1 LOT										$60,000	$60,000	
MECHANICAL VENTILATION																	
82	XXX	MECHANICAL VENTILATION AT HT & LV SWITCHGEAR ROOM			1 LOT										$5,000	$5,000	
FIRE/FIGHTING																	
83	XXX	FIXED / MANUAL FIRE WATER MONITOR	-		20										$1,000	$20,000	
84	XXX	DELUGE VALVE			20										$800	$16,000	
85	XXX	REMOTE CONTROLLED FIRE WATER MONITOR			20										$2,000	$40,000	
86	XXX	HOSE BOX			30										$200	$6,000	
87	XXX	WATER SPRINKLER			600										$60	$36,000	
88	XXX	9 -50 KG POTABLE DRY POWDER FIRE EXTINGUISHER, CLASS ABC			90										$350	$31,500	
89	XXX	4.5 KG POTABLE EXTINGUISHER	-		50										$200	$10,000	
90	XXX	SAFETY SHOWER / EYE WASH	-		8										$1,400	$11,200	
91	XXX	HOSE REEL	-		50										$350	$17,500	

TOTAL:	$18,348,200

Imported Piping BOQ

Sq No.	Piping Class	Item	Main Size (in)	Second Size (in)	QTY	Unit Price	Total Price	Remarks
1	1CP	PIPE, ERW, BW, STD, API 5L GR.B, ASME B36.10M	2	---	476	$9	$4,284	
2	1CP	PIPE, ERW, BW, STD, API 5L GR.B, ASME B36.10M	4	---	470	$25	$11,750	
3	1CP	PIPE, ERW, BW, STD, API 5L GR.B, ASME B36.10M	6	---	843	$45	$37,935	
4	1CP	PIPE, ERW, BW, STD, API 5L GR.B, ASME B36.10M	8	---	342	$70	$23,940	
5	1CP	PIPE, ERW, BW, STD, API 5L GR.B, ASME B36.10M	10	---	5354	$103	$551,462	
6	1CP	PIPE, ERW, BW, STD, API 5L GR.B, ASME B36.10M	12	---	874	$123	$107,502	
7	1CP	PIPE, ERW, BW, STD, API 5L GR.B, ASME B36.10M	16	---	1723	$182	$313,586	
8	1CP	ELBOW 90, LR, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9	2	---	13	$10	$130	
9	1CP	ELBOW 90, LR, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9	4	---	15	$12	$180	
10	1CP	ELBOW 90, LR, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9	6	---	16	$19	$304	
11	1CP	ELBOW 90, LR, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9	8	---	6	$50	$300	
12	1CP	ELBOW 90, LR, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9	10	---	216	$95	$20,520	
13	1CP	ELBOW 90, LR, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9	12	---	16	$154	$2,464	
14	1CP	ELBOW 90, LR, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9	16	---	34	$298	$10,132	
15	1CP	ELBOW 45, LR, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9	2	---		$10	$0	
16	1CP	ELBOW 45, LR, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9	4	---		$12	$0	
17	1CP	ELBOW 45, LR, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9	6	---		$19	$0	
18	1CP	ELBOW 45, LR, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9	8	---	2	$50	$100	
19	1CP	ELBOW 45, LR, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9	10	---		$95	$0	
20	1CP	ELBOW 45, LR, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9	12	---	4	$154	$616	
21	1CP	ELBOW 45, LR, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9	16	---	1	$298	$298	
22	1CP	TEE STRAIGHT, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9	2	---		$15	$0	
23	1CP	TEE STRAIGHT, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9	4	---	48	$18	$864	
24	1CP	TEE STRAIGHT, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9	6	---	52	$42	$2,184	
25	1CP	TEE STRAIGHT, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9	8	---	34	$75	$2,550	
26	1CP	TEE STRAIGHT, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9	10	---	122	$124	$15,128	
27	1CP	TEE STRAIGHT, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9	12	---	26	$143	$3,718	
28	1CP	TEE STRAIGHT, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9	16	---	55	$283	$15,565	
29	1CP	TEE REDUCING, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9	2	---	1	$16	$16	
30	1CP	TEE REDUCING, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9	4	---		$19	$0	
31	1CP	TEE REDUCING, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9	6	4	29	$45	$1,305	
32	1CP	TEE REDUCING, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9	8	6	4	$79	$316	

Imported Piping BOQ

Sq No.	Piping Class	Item	Main Size (in)	Second Size (in)	QTY	Unit Price	Total Price	Remarks
33	1CP	TEE REDUCING, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9	10	8	44	$131	$5,764	
34	1CP	TEE REDUCING, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9	12	10	12	$151	$1,812	
35	1CP	TEE REDUCING, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9	16	12	14	$298	$4,172	
36	1CP	REDUCER CON, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9	2	---		$24	$0	
37	1CP	REDUCER CON, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9	4	---		$32	$0	
38	1CP	REDUCER CON, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9	6	4	8	$42	$336	
39	1CP	REDUCER CON, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9	8	---		$72	$0	
40	1CP	REDUCER CON, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9	10	---	16	$84	$1,344	
41	1CP	REDUCER CON, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9	12	---	2	$112	$224	
42	1CP	REDUCER CON, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9	16	12	2	$134	$268	
43	1CP	REDUCER ECC, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9	2	---		$28	$0	
44	1CP	REDUCER ECC, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9	4	---		$37	$0	
45	1CP	REDUCER ECC, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9	6	4	4	$49	$196	
46	1CP	REDUCER ECC, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9	8	6	6	$83	$498	
47	1CP	REDUCER ECC, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9	10	---	2	$97	$194	
48	1CP	REDUCER ECC, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9	12	---	3	$129	$387	
49	1CP	REDUCER ECC, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9	16	---	1	$155	$155	
50	1CP	FLANGE, WN, RF, 150#, STD, ASTM A105, ASME B16.5	2	---	4	$15	$60	
51	1CP	FLANGE, WN, RF, 150#, STD, ASTM A105, ASME B16.5	4	---	182	$22	$4,004	
52	1CP	FLANGE, WN, RF, 150#, STD, ASTM A105, ASME B16.5	6	---	136	$43	$5,848	
53	1CP	FLANGE, WN, RF, 150#, STD, ASTM A105, ASME B16.5	8	---	152	$98	$14,896	
54	1CP	FLANGE, WN, RF, 150#, STD, ASTM A105, ASME B16.5	10	---	283	$189	$53,487	
55	1CP	FLANGE, WN, RF, 150#, STD, ASTM A105, ASME B16.5	12	---	62	$286	$17,732	
56	1CP	FLANGE, WN, RF, 150#, STD, ASTM A105, ASME B16.5	16	---	161	$456	$73,416	
57	1CP	STUD BOLT/2 HEAVY HEX NUTS, ASTM A193 GR. B7/A194 GR.2H, ASME B18.2.1/ASME B18.2.2	2	---	4	$12	$48	
58	1CP	STUD BOLT/2 HEAVY HEX NUTS, ASTM A193 GR. B7/A194 GR.2H, ASME B18.2.1/ASME B18.2.2	4	---	146	$22	$3,212	
59	1CP	STUD BOLT/2 HEAVY HEX NUTS, ASTM A193 GR. B7/A194 GR.2H, ASME B18.2.1/ASME B18.2.2	6	---	109	$43	$4,687	
60	1CP	STUD BOLT/2 HEAVY HEX NUTS, ASTM A193 GR. B7/A194 GR.2H, ASME B18.2.1/ASME B18.2.2	8	---	122	$61	$7,442	
61	1CP	STUD BOLT/2 HEAVY HEX NUTS, ASTM A193 GR. B7/A194 GR.2H, ASME B18.2.1/ASME B18.2.2	10	---	227	$76	$17,252	
62	1CP	STUD BOLT/2 HEAVY HEX NUTS, ASTM A193 GR. B7/A194 GR.2H, ASME B18.2.1/ASME B18.2.2	12	---	50	$76	$3,800	
63	1CP	STUD BOLT/2 HEAVY HEX NUTS, ASTM A193 GR. B7/A194 GR.2H, ASME B18.2.1/ASME B18.2.2	16	---	129	$85	$10,965	
64	1CP	GASKET, SPIRAL WOUND, RF, 150#, 4.5MM, SS316, RING TYPE, ASME B16.20	2	---	4	$5	$20	

Imported Piping BOQ

Sq No.	Piping Class	Item	Main Size (in)	Second Size (in)	QTY	Unit Price	Total Price	Remarks
65	1CP	GASKET, SPIRAL WOUND, RF, 150#, 4.5MM, SS316, RING TYPE, ASME B16.20	4	---	157	$11	$1,727	
66	1CP	GASKET, SPIRAL WOUND, RF, 150#, 4.5MM, SS316, RING TYPE, ASME B16.20	6	---	88	$15	$1,320	
67	1CP	GASKET, SPIRAL WOUND, RF, 150#, 4.5MM, SS316, RING TYPE, ASME B16.20	8	---	98	$24	$2,352	
68	1CP	GASKET, SPIRAL WOUND, RF, 150#, 4.5MM, SS316, RING TYPE, ASME B16.20	10	---	182	$36	$6,552	
69	1CP	GASKET, SPIRAL WOUND, RF, 150#, 4.5MM, SS316, RING TYPE, ASME B16.20	12	---	40	$43	$1,720	
70	1CP	GASKET, SPIRAL WOUND, RF, 150#, 4.5MM, SS316, RING TYPE, ASME B16.20	16	---	104	$50	$5,200	
71	1CP	FLANGE, BLIND, RF, 150#, STD, ASTM A105, ASME B16.5	2	---		$11	$0	
72	1CP	FLANGE, BLIND, RF, 150#, STD, ASTM A105, ASME B16.5	4	---	18	$16	$288	
73	1CP	FLANGE, BLIND, RF, 150#, STD, ASTM A105, ASME B16.5	6	---	23	$31	$713	
74	1CP	FLANGE, BLIND, RF, 150#, STD, ASTM A105, ASME B16.5	8	---	17	$69	$1,173	
75	1CP	FLANGE, BLIND, RF, 150#, STD, ASTM A105, ASME B16.5	10	---	48	$133	$6,384	
76	1CP	FLANGE, BLIND, RF, 150#, STD, ASTM A105, ASME B16.5	12	---	4	$201	$804	
77	1CP	FLANGE, BLIND, RF, 150#, STD, ASTM A105, ASME B16.5	16	---	9	$326	$2,934	
78	1CP	STUD BOLT/2 HEAVY HEX NUTS, ASTM A193 GR. B7/A194 GR.2H, ASME B18.2.1/ASME B18.2.2	2	---	0	$12	$0	
79	1CP	STUD BOLT/2 HEAVY HEX NUTS, ASTM A193 GR. B7/A194 GR.2H, ASME B18.2.1/ASME B18.2.2	4	---	15	$22	$330	
80	1CP	STUD BOLT/2 HEAVY HEX NUTS, ASTM A193 GR. B7/A194 GR.2H, ASME B18.2.1/ASME B18.2.2	6	---	19	$43	$817	
81	1CP	STUD BOLT/2 HEAVY HEX NUTS, ASTM A193 GR. B7/A194 GR.2H, ASME B18.2.1/ASME B18.2.2	8	---	14	$61	$854	
82	1CP	STUD BOLT/2 HEAVY HEX NUTS, ASTM A193 GR. B7/A194 GR.2H, ASME B18.2.1/ASME B18.2.2	10	---	39	$76	$2,964	
83	1CP	STUD BOLT/2 HEAVY HEX NUTS, ASTM A193 GR. B7/A194 GR.2H, ASME B18.2.1/ASME B18.2.2	12	---	4	$76	$304	
84	1CP	STUD BOLT/2 HEAVY HEX NUTS, ASTM A193 GR. B7/A194 GR.2H, ASME B18.2.1/ASME B18.2.2	16	---	8	$85	$680	
85	1CP	GASKET, SPIRAL WOUND, RF, 150#, 4.5MM, SS316, RING TYPE, ASME B16.20	2	---	0	$5	$0	
86	1CP	GASKET, SPIRAL WOUND, RF, 150#, 4.5MM, SS316, RING TYPE, ASME B16.20	4	---	12	$11	$132	
87	1CP	GASKET, SPIRAL WOUND, RF, 150#, 4.5MM, SS316, RING TYPE, ASME B16.20	6	---	16	$15	$240	
88	1CP	GASKET, SPIRAL WOUND, RF, 150#, 4.5MM, SS316, RING TYPE, ASME B16.20	8	---	12	$24	$288	
89	1CP	GASKET, SPIRAL WOUND, RF, 150#, 4.5MM, SS316, RING TYPE, ASME B16.20	10	---	32	$36	$1,152	
90	1CP	GASKET, SPIRAL WOUND, RF, 150#, 4.5MM, SS316, RING TYPE, ASME B16.20	12	---	4	$43	$172	
91	1CP	GASKET, SPIRAL WOUND, RF, 150#, 4.5MM, SS316, RING TYPE, ASME B16.20	16	---	7	$50	$350	
92	1CP	CAP, BW, 150#, STD, ASTM A105, ASME B16.5	2	---	1	$9	$9	
93	1CP	CAP, BW, 150#, STD, ASTM A105, ASME B16.5	4	---		$16	$0	
94	1CP	CAP, BW, 150#, STD, ASTM A105, ASME B16.5	6	---		$36	$0	
95	1CP	CAP, BW, 150#, STD, ASTM A105, ASME B16.5	8	---	2	$62	$124	
96	1CP	CAP, BW, 150#, STD, ASTM A105, ASME B16.5	10	---		$164	$0	

Imported Piping BOQ

Sq No.	Piping Class	Item	Main Size (in)	Second Size (in)	QTY	Unit Price	Total Price	Remarks
97	1CP	CAP, BW, 150#, STD, ASTM A105, ASME B16.5	12	---		$215	$0	
98	1CP	CAP, BW, 150#, STD, ASTM A105, ASME B16.5	16	---	1	$326	$326	
99	1CP	SPECTACLE BLIND, RF, 150#, ASTM A105, ASME B16.48	2	---		$62	$0	
100	1CP	SPECTACLE BLIND, RF, 150#, ASTM A105, ASME B16.48	4	---	25	$75	$1,875	
101	1CP	SPECTACLE BLIND, RF, 150#, ASTM A105, ASME B16.48	6	---	2	$86	$172	
102	1CP	SPECTACLE BLIND, RF, 150#, ASTM A105, ASME B16.48	8	---	16	$102	$1,632	
103	1CP	SPECTACLE BLIND, RF, 150#, ASTM A105, ASME B16.48	10	---	17	$168	$2,856	
104	1CP	SPECTACLE BLIND, RF, 150#, ASTM A105, ASME B16.48	12	---	8	$234	$1,872	
105	1CP	SPECTACLE BLIND, RF, 150#, ASTM A105, ASME B16.48	16	---	12	$294	$3,528	
106	1CP	Gate Valve, FLGD, 150#, CS, RF	2	---	12	$442	$5,304	
107	1CP	Gate Valve, FLGD, 150#, CS, RF	4	---	43	$720	$30,960	
108	1CP	Gate Valve, FLGD, 150#, CS, RF	6	---	23	$1,093	$25,139	
109	1CP	Gate Valve, FLGD, 150#, CS, RF	8	---	19	$1,627	$30,913	
110	1CP	Gate Valve, FLGD, 150#, CS, RF	10	---	12	$1,827	$21,924	
111	1CP	Gate Valve, FLGD, 150#, CS, RF	12	---	10	$3,128	$31,280	
112	1CP	Gate Valve, FLGD, 150#, CS, RF	16	---	16	$4,650	$74,400	
113	1CP	Globe Valve, FLGD, 150#, CS, RF	2	---	32	$597	$19,104	
114	1CP	Globe Valve, FLGD, 150#, CS, RF	4	---	45	$972	$43,740	
115	1CP	Globe Valve, FLGD, 150#, CS, RF	6	---	20	$1,476	$29,520	
116	1CP	Globe Valve, FLGD, 150#, CS, RF	8	---	12	$2,197	$26,364	
117	1CP	Globe Valve, FLGD, 150#, CS, RF	10	---	32	$2,467	$78,944	
118	1CP	Globe Valve, FLGD, 150#, CS, RF	12	---	12	$4,223	$50,676	
119	1CP	Globe Valve, FLGD, 150#, CS, RF	16	---	12	$6,278	$75,336	
120	1CP	Ball Valve, RB , FLGD, 150#, CS, RF	2	---	12	$1,128	$13,536	
121	1CP	Ball Valve, RB , FLGD, 150#, CS, RF	4	---	14	$2,105	$29,470	
122	1CP	Ball Valve, RB , FLGD, 150#, CS, RF	6	---	23	$3,842	$88,366	
123	1CP	Ball Valve, RB , FLGD, 150#, CS, RF	8	---	42	$4,562	$191,604	
124	1CP	Ball Valve, RB , FLGD, 150#, CS, RF	10	---	12	$7,483	$89,796	
125	1CP	Ball Valve, RB , FLGD, 150#, CS, RF	12	---	2	$8,652	$17,304	
126	1CP	Ball Valve, RB , FLGD, 150#, CS, RF	16	---	1	$10,584	$10,584	
127	1CP	Check Valve, SWING, , FLGD, 150#, CS, RF	2	---	1	$532	$532	
128	1CP	Check Valve, SWING, , FLGD, 150#, CS, RF	4	---	1	$748	$748	

Imported Piping BOQ

Sq No.	Piping Class	Item	Main Size (in)	Second Size (in)	QTY	Unit Price	Total Price	Remarks
129	1CP	Check Valve, SWING, , FLGD, 150#, CS, RF	6	---	8	$867	$6,936	
130	1CP	Check Valve, SWING, , FLGD, 150#, CS, RF	8	---	4	$1,184	$4,736	
131	1CP	Check Valve, SWING, , FLGD, 150#, CS, RF	10	---	2	$2,461	$4,922	
132	1CP	Check Valve, SWING, , FLGD, 150#, CS, RF	12	---	4	$3,548	$14,192	
133	1CP	Check Valve, SWING, , FLGD, 150#, CS, RF	16	---	1	$5,724	$5,724	
134	1CP	Y-Type Strainer, FLGD, 150#, CS, RF	2	---	1	$421	$421	
135	1CP	Y-Type Strainer, FLGD, 150#, CS, RF	4	---	6	$650	$3,900	
136	1CP	Y-Type Strainer, FLGD, 150#, CS, RF	6	---	2	$1,385	$2,770	
137	1CP	Y-Type Strainer, FLGD, 150#, CS, RF	8	---	4	$2,983	$11,932	
138	1CP	Y-Type Strainer, FLGD, 150#, CS, RF	10	---	2	$4,231	$8,462	
139	1CP	Y-Type Strainer, FLGD, 150#, CS, RF	12	---	8	$6,542	$52,336	
140	1CP	Y-Type Strainer, FLGD, 150#, CS, RF	16	---	6	$7,953	$47,718	
141	1CP	T-Type Strainer, FLGD, 150#, CS, RF	2	---	1	$421	$421	
142	1CP	T-Type Strainer, FLGD, 150#, CS, RF	4	---		$650	$0	
143	1CP	T-Type Strainer, FLGD, 150#, CS, RF	6	---	4	$1,385	$5,540	
144	1CP	T-Type Strainer, FLGD, 150#, CS, RF	8	---	2	$2,983	$5,966	
145	1CP	T-Type Strainer, FLGD, 150#, CS, RF	10	---	2	$4,231	$8,462	
146	1CP	T-Type Strainer, FLGD, 150#, CS, RF	12	---	6	$6,542	$39,252	
147	1CP	T-Type Strainer, FLGD, 150#, CS, RF	16	---		$7,953	$0	
148	1GF	PIPE, ERW, BW, STD, API 5L GR.B, ASME B36.10M, GALV	2	---	5	$13	$65	
149	1GF	PIPE, ERW, BW, STD, API 5L GR.B, ASME B36.10M, GALV	4	---	1274	$28	$35,672	
150	1GF	PIPE, ERW, BW, STD, API 5L GR.B, ASME B36.10M, GALV	6	---	914	$49	$44,786	
151	1GF	PIPE, ERW, BW, STD, API 5L GR.B, ASME B36.10M, GALV	8	---	742	$75	$55,650	
152	1GF	PIPE, ERW, BW, STD, API 5L GR.B, ASME B36.10M, GALV	10	---	300	$115	$34,500	
153	1GF	PIPE, ERW, BW, STD, API 5L GR.B, ASME B36.10M, GALV	12	---	845	$142	$119,990	
154	1GF	PIPE, ERW, BW, STD, API 5L GR.B, ASME B36.10M, GALV	16	---	29	$203	$5,887	
155	1GF	ELBOW 90, LR, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9, GALV	2	---	2	$13	$26	
156	1GF	ELBOW 90, LR, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9, GALV	4	---	22	$15	$330	
157	1GF	ELBOW 90, LR, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9, GALV	6	---	68	$22	$1,496	
158	1GF	ELBOW 90, LR, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9, GALV	8	---	25	$54	$1,350	
159	1GF	ELBOW 90, LR, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9, GALV	10	---	13	$100	$1,300	
160	1GF	ELBOW 90, LR, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9, GALV	12	---	22	$168	$3,696	

Imported Piping BOQ

Sq No.	Piping Class	Item	Main Size (in)	Second Size (in)	QTY	Unit Price	Total Price	Remarks
161	1GF	ELBOW 90, LR, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9, GALV	16	---	2	$324	$648	
162	1GF	ELBOW 45, LR, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9, GALV	2	---		$13	$0	
163	1GF	ELBOW 45, LR, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9, GALV	4	---		$15	$0	
164	1GF	ELBOW 45, LR, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9, GALV	6	---	1	$22	$22	
165	1GF	ELBOW 45, LR, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9, GALV	8	---		$54	$0	
166	1GF	ELBOW 45, LR, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9, GALV	10	---	4	$100	$400	
167	1GF	ELBOW 45, LR, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9, GALV	12	---	2	$168	$336	
168	1GF	ELBOW 45, LR, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9, GALV	16	---		$324	$0	
169	1GF	TEE STRAIGHT, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9, GALV	2	---		$17	$0	
170	1GF	TEE STRAIGHT, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9, GALV	4	---	8	$20	$160	
171	1GF	TEE STRAIGHT, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9, GALV	6	---	11	$47	$517	
172	1GF	TEE STRAIGHT, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9, GALV	8	---	6	$83	$498	
173	1GF	TEE STRAIGHT, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9, GALV	10	---	1	$137	$137	
174	1GF	TEE STRAIGHT, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9, GALV	12	---	3	$158	$474	
175	1GF	TEE STRAIGHT, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9, GALV	16	---	1	$312	$312	
176	1GF	TEE REDUCING, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9, GALV	2	---	0	$17	$0	
177	1GF	TEE REDUCING, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9, GALV	4	---	0	$20	$0	
178	1GF	TEE REDUCING, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9, GALV	6	4	6	$47	$282	
179	1GF	TEE REDUCING, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9, GALV	8	6	5	$83	$415	
180	1GF	TEE REDUCING, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9, GALV	10	8	1	$137	$137	
181	1GF	TEE REDUCING, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9, GALV	12	10	3	$158	$474	
182	1GF	TEE REDUCING, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9, GALV	16	12		$312	$0	
183	1GF	REDUCER CON, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9, GALV	2	---		$27	$0	
184	1GF	REDUCER CON, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9, GALV	4	---	1	$36	$36	
185	1GF	REDUCER CON, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9, GALV	6	4	4	$47	$188	
186	1GF	REDUCER CON, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9, GALV	8	6	3	$80	$240	
187	1GF	REDUCER CON, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9, GALV	10	---		$93	$0	
188	1GF	REDUCER CON, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9, GALV	12	---		$124	$0	
189	1GF	REDUCER CON, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9, GALV	16	12		$148	$0	
190	1GF	REDUCER ECC, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9, GALV	2	---		$31	$0	
191	1GF	REDUCER ECC, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9, GALV	4	---	14	$41	$574	
192	1GF	REDUCER ECC, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9, GALV	6	4		$54	$0	

Imported Piping BOQ

Sq No.	Piping Class	Item	Main Size (in)	Second Size (in)	QTY	Unit Price	Total Price	Remarks
193	1GF	REDUCER ECC, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9, GALV	8	6	4	$92	$368	
194	1GF	REDUCER ECC, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9, GALV	10	---		$107	$0	
195	1GF	REDUCER ECC, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9, GALV	12	---	2	$142	$284	
196	1GF	REDUCER ECC, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9, GALV	16	---		$171	$0	
197	1GF	FLANGE, WN, RF, 150#, STD, ASTM A105, ASME B16.5, GALV	2	---	2	$16	$32	
198	1GF	FLANGE, WN, RF, 150#, STD, ASTM A105, ASME B16.5, GALV	4	---	60	$24	$1,440	
199	1GF	FLANGE, WN, RF, 150#, STD, ASTM A105, ASME B16.5, GALV	6	---	85	$46	$3,910	
200	1GF	FLANGE, WN, RF, 150#, STD, ASTM A105, ASME B16.5, GALV	8	---	41	$103	$4,223	
201	1GF	FLANGE, WN, RF, 150#, STD, ASTM A105, ASME B16.5, GALV	10	---	9	$199	$1,791	
202	1GF	FLANGE, WN, RF, 150#, STD, ASTM A105, ASME B16.5, GALV	12	---	11	$301	$3,311	
203	1GF	FLANGE, WN, RF, 150#, STD, ASTM A105, ASME B16.5, GALV	16	---	5	$479	$2,395	
204	1GF	STUD BOLT/2 HEAVY HEX NUTS, ASTM A193 GR. B7/A194 GR.2H, ASME B18.2.1/ASME B18.2.2	2	---	2	$12	$24	
205	1GF	STUD BOLT/2 HEAVY HEX NUTS, ASTM A193 GR. B7/A194 GR.2H, ASME B18.2.1/ASME B18.2.2	4	---	48	$22	$1,056	
206	1GF	STUD BOLT/2 HEAVY HEX NUTS, ASTM A193 GR. B7/A194 GR.2H, ASME B18.2.1/ASME B18.2.2	6	---	68	$43	$2,924	
207	1GF	STUD BOLT/2 HEAVY HEX NUTS, ASTM A193 GR. B7/A194 GR.2H, ASME B18.2.1/ASME B18.2.2	8	---	33	$61	$2,013	
208	1GF	STUD BOLT/2 HEAVY HEX NUTS, ASTM A193 GR. B7/A194 GR.2H, ASME B18.2.1/ASME B18.2.2	10	---	8	$76	$608	
209	1GF	STUD BOLT/2 HEAVY HEX NUTS, ASTM A193 GR. B7/A194 GR.2H, ASME B18.2.1/ASME B18.2.2	12	---	9	$76	$684	
210	1GF	STUD BOLT/2 HEAVY HEX NUTS, ASTM A193 GR. B7/A194 GR.2H, ASME B18.2.1/ASME B18.2.2	16	---	4	$85	$340	
211	1GF	GASKET, SPIRAL WOUND, RF, 150#, 4.5MM, SS316, RING TYPE, ASME B16.20	2	---	2	$5	$10	
212	1GF	GASKET, SPIRAL WOUND, RF, 150#, 4.5MM, SS316, RING TYPE, ASME B16.20	4	---	39	$11	$429	
213	1GF	GASKET, SPIRAL WOUND, RF, 150#, 4.5MM, SS316, RING TYPE, ASME B16.20	6	---	55	$15	$825	
214	1GF	GASKET, SPIRAL WOUND, RF, 150#, 4.5MM, SS316, RING TYPE, ASME B16.20	8	---	27	$24	$648	
215	1GF	GASKET, SPIRAL WOUND, RF, 150#, 4.5MM, SS316, RING TYPE, ASME B16.20	10	---	7	$36	$252	
216	1GF	GASKET, SPIRAL WOUND, RF, 150#, 4.5MM, SS316, RING TYPE, ASME B16.20	12	---	8	$43	$344	
217	1GF	GASKET, SPIRAL WOUND, RF, 150#, 4.5MM, SS316, RING TYPE, ASME B16.20	16	---	4	$50	$200	
218	1GF	FLANGE, BLIND, RF, 150#, STD, ASTM A105, ASME B16.5, GALV	2	---	4	$12	$48	
219	1GF	FLANGE, BLIND, RF, 150#, STD, ASTM A105, ASME B16.5, GALV	4	---	12	$17	$204	
220	1GF	FLANGE, BLIND, RF, 150#, STD, ASTM A105, ASME B16.5, GALV	6	---	10	$33	$330	
221	1GF	FLANGE, BLIND, RF, 150#, STD, ASTM A105, ASME B16.5, GALV	8	---	5	$73	$365	
222	1GF	FLANGE, BLIND, RF, 150#, STD, ASTM A105, ASME B16.5, GALV	10	---	2	$140	$280	
223	1GF	FLANGE, BLIND, RF, 150#, STD, ASTM A105, ASME B16.5, GALV	12	---	2	$212	$424	
224	1GF	FLANGE, BLIND, RF, 150#, STD, ASTM A105, ASME B16.5, GALV	16	---	2	$343	$686	

Imported Piping BOQ

Sq No.	Piping Class	Item	Main Size (in)	Second Size (in)	QTY	Unit Price	Total Price	Remarks
225	1GF	STUD BOLT/2 HEAVY HEX NUTS, ASTM A193 GR. B7/A194 GR.2H, ASME B18.2.1/ASME B18.2.2	2	---	4	$12	$48	
226	1GF	STUD BOLT/2 HEAVY HEX NUTS, ASTM A193 GR. B7/A194 GR.2H, ASME B18.2.1/ASME B18.2.2	4	---	10	$22	$220	
227	1GF	STUD BOLT/2 HEAVY HEX NUTS, ASTM A193 GR. B7/A194 GR.2H, ASME B18.2.1/ASME B18.2.2	6	---	8	$43	$344	
228	1GF	STUD BOLT/2 HEAVY HEX NUTS, ASTM A193 GR. B7/A194 GR.2H, ASME B18.2.1/ASME B18.2.2	8	---	4	$61	$244	
229	1GF	STUD BOLT/2 HEAVY HEX NUTS, ASTM A193 GR. B7/A194 GR.2H, ASME B18.2.1/ASME B18.2.2	10	---	2	$76	$152	
230	1GF	STUD BOLT/2 HEAVY HEX NUTS, ASTM A193 GR. B7/A194 GR.2H, ASME B18.2.1/ASME B18.2.2	12	---	2	$76	$152	
231	1GF	STUD BOLT/2 HEAVY HEX NUTS, ASTM A193 GR. B7/A194 GR.2H, ASME B18.2.1/ASME B18.2.2	16	---	2	$85	$170	
232	1GF	GASKET, SPIRAL WOUND, RF, 150#, 4.5MM, SS316, RING TYPE, ASME B16.20	2	---	4	$5	$20	
233	1GF	GASKET, SPIRAL WOUND, RF, 150#, 4.5MM, SS316, RING TYPE, ASME B16.20	4	---	8	$11	$88	
234	1GF	GASKET, SPIRAL WOUND, RF, 150#, 4.5MM, SS316, RING TYPE, ASME B16.20	6	---	7	$15	$105	
235	1GF	GASKET, SPIRAL WOUND, RF, 150#, 4.5MM, SS316, RING TYPE, ASME B16.20	8	---	4	$24	$96	
236	1GF	GASKET, SPIRAL WOUND, RF, 150#, 4.5MM, SS316, RING TYPE, ASME B16.20	10	---	2	$36	$72	
237	1GF	GASKET, SPIRAL WOUND, RF, 150#, 4.5MM, SS316, RING TYPE, ASME B16.20	12	---	2	$43	$86	
238	1GF	GASKET, SPIRAL WOUND, RF, 150#, 4.5MM, SS316, RING TYPE, ASME B16.20	16	---	2	$50	$100	
239	1GF	SPECTACLE BLIND, RF, 150#, ASTM A105, ASME B16.48, GALV	2	---		$66	$0	
240	1GF	SPECTACLE BLIND, RF, 150#, ASTM A105, ASME B16.48, GALV	4	---		$79	$0	
241	1GF	SPECTACLE BLIND, RF, 150#, ASTM A105, ASME B16.48, GALV	6	---	3	$91	$273	
242	1GF	SPECTACLE BLIND, RF, 150#, ASTM A105, ASME B16.48, GALV	8	---		$108	$0	
243	1GF	SPECTACLE BLIND, RF, 150#, ASTM A105, ASME B16.48, GALV	10	---	2	$177	$354	
244	1GF	SPECTACLE BLIND, RF, 150#, ASTM A105, ASME B16.48, GALV	12	---		$246	$0	
245	1GF	SPECTACLE BLIND, RF, 150#, ASTM A105, ASME B16.48, GALV	16	---		$309	$0	
246	1GF	Gate Valve, FLGD, 150#, CI, RF	2	---		$310	$0	
247	1GF	Gate Valve, FLGD, 150#, CI, RF	4	---		$504	$0	
248	1GF	Gate Valve, FLGD, 150#, CI, RF	6	---	6	$766	$4,596	
249	1GF	Gate Valve, FLGD, 150#, CI, RF	8	---	3	$1,139	$3,417	
250	1GF	Gate Valve, FLGD, 150#, CI, RF	10	---	1	$1,279	$1,279	
251	1GF	Gate Valve, FLGD, 150#, CI, RF	12	---	8	$2,190	$17,520	
252	1GF	Gate Valve, FLGD, 150#, CI, RF	16	---	2	$3,255	$6,510	
253	1GF	Globe Valve, FLGD, 150#, CI, RF	2	---		$323	$0	
254	1GF	Globe Valve, FLGD, 150#, CI, RF	4	---		$525	$0	
255	1GF	Globe Valve, FLGD, 150#, CI, RF	6	---	1	$798	$798	
256	1GF	Globe Valve, FLGD, 150#, CI, RF	8	---		$1,187	$0	

Imported Piping BOQ

Sq No.	Piping Class	Item	Main Size (in)	Second Size (in)	QTY	Unit Price	Total Price	Remarks
257	1GF	Globe Valve, FLGD, 150#, CI, RF	10	---	6	$1,333	$7,998	
258	1GF	Globe Valve, FLGD, 150#, CI, RF	12	---	2	$2,281	$4,562	
259	1GF	Globe Valve, FLGD, 150#, CI, RF	16	---		$3,391	$0	
260	1GF	Ball Valve, RB , FLGD, 150#, CI, RF	2	---		$508	$0	
261	1GF	Ball Valve, RB , FLGD, 150#, CI, RF	4	---	6	$948	$5,688	
262	1GF	Ball Valve, RB , FLGD, 150#, CI, RF	6	---		$1,729	$0	
263	1GF	Ball Valve, RB , FLGD, 150#, CI, RF	8	---	1	$2,053	$2,053	
264	1GF	Ball Valve, RB , FLGD, 150#, CI, RF	10	---		$3,368	$0	
265	1GF	Ball Valve, RB , FLGD, 150#, CI, RF	12	---	2	$3,894	$7,788	
266	1GF	Ball Valve, RB , FLGD, 150#, CI, RF	16	---		$4,763	$0	
267	1GF	Check Valve, SWING, , FLGD, 150#, CI, RF	2	---		$288	$0	
268	1GF	Check Valve, SWING, , FLGD, 150#, CI, RF	4	---		$404	$0	
269	1GF	Check Valve, SWING, , FLGD, 150#, CI, RF	6	---	6	$469	$2,814	
270	1GF	Check Valve, SWING, , FLGD, 150#, CI, RF	8	---		$640	$0	
271	1GF	Check Valve, SWING, , FLGD, 150#, CI, RF	10	---		$1,329	$0	
272	1GF	Check Valve, SWING, , FLGD, 150#, CI, RF	12	---	1	$1,916	$1,916	
273	1GF	Check Valve, SWING, , FLGD, 150#, CI, RF	16	---		$3,091	$0	
274	1GF	Y-Type Strainer, FLGD, 150#, CS, RF, GALV	2	---	2	$464	$928	
275	1GF	Y-Type Strainer, FLGD, 150#, CS, RF, GALV	4	---		$715	$0	
276	1GF	Y-Type Strainer, FLGD, 150#, CS, RF, GALV	6	---		$1,524	$0	
277	1GF	Y-Type Strainer, FLGD, 150#, CS, RF, GALV	8	---	2	$3,282	$6,564	
278	1GF	Y-Type Strainer, FLGD, 150#, CS, RF, GALV	10	---	1	$4,655	$4,655	
279	1GF	Y-Type Strainer, FLGD, 150#, CS, RF, GALV	12	---	1	$7,197	$7,197	
280	1GF	Y-Type Strainer, FLGD, 150#, CS, RF, GALV	16	---	2	$8,749	$17,498	
281	1GF	T-Type Strainer, FLGD, 150#, CS, RF, GALV	2	---		$464	$0	
282	1GF	T-Type Strainer, FLGD, 150#, CS, RF, GALV	4	---		$715	$0	
283	1GF	T-Type Strainer, FLGD, 150#, CS, RF, GALV	6	---	1	$1,524	$1,524	
284	1GF	T-Type Strainer, FLGD, 150#, CS, RF, GALV	8	---		$3,282	$0	
285	1GF	T-Type Strainer, FLGD, 150#, CS, RF, GALV	10	---	1	$4,655	$4,655	
286	1GF	T-Type Strainer, FLGD, 150#, CS, RF, GALV	12	---	2	$7,197	$14,394	
287	1GF	T-Type Strainer, FLGD, 150#, CS, RF, GALV	16	---		$8,749	$0	
288	1GF	Butterfly Valve, FLGD, 150#, CI, RF	2	---		$489	$0	

Imported Piping BOQ

Sq No.	Piping Class	Item	Main Size (in)	Second Size (in)	QTY	Unit Price	Total Price	Remarks
289	1GF	Butterfly Valve, FLGD, 150#, CI, RF	4	---	6	$891	$5,346	
290	1GF	Butterfly Valve, FLGD, 150#, CI, RF	6	---	21	$1,463	$30,723	
291	1GF	Butterfly Valve, FLGD, 150#, CI, RF	8	---	8	$2,365	$18,920	
292	1GF	Butterfly Valve, FLGD, 150#, CI, RF	10	---	3	$3,589	$10,767	
293	1GF	Butterfly Valve, FLGD, 150#, CI, RF	12	---	3	$4,352	$13,056	
294	1GF	Butterfly Valve, FLGD, 150#, CI, RF	16	---		$6,587	$0	
295	1PF	Pipe, FRP MATERIAL, MANUFACTURER STD	2	---		$7	$0	
296	1PF	Pipe, FRP MATERIAL, MANUFACTURER STD	4	---	120	$23	$2,760	
297	1PF	Pipe, FRP MATERIAL, MANUFACTURER STD	6	---	856	$44	$37,664	
298	1PF	Pipe, FRP MATERIAL, MANUFACTURER STD	8	---	24	$65	$1,560	
299	1PF	Pipe, FRP MATERIAL, MANUFACTURER STD	10	---		$95	$0	
300	1PF	Pipe, FRP MATERIAL, MANUFACTURER STD	12	---		$118	$0	
301	1PF	Pipe, FRP MATERIAL, MANUFACTURER STD	16	---		$164	$0	
302	1PF	Elbow 90, FRP MATERIAL, MANUFACTURER STD	2	---		$9	$0	
303	1PF	Elbow 90, FRP MATERIAL, MANUFACTURER STD	4	---	14	$11	$154	
304	1PF	Elbow 90, FRP MATERIAL, MANUFACTURER STD	6	---	21	$18	$378	
305	1PF	Elbow 90, FRP MATERIAL, MANUFACTURER STD	8	---	8	$46	$368	
306	1PF	Elbow 90, FRP MATERIAL, MANUFACTURER STD	10	---		$82	$0	
307	1PF	Elbow 90, FRP MATERIAL, MANUFACTURER STD	12	---	12	$146	$1,752	
308	1PF	Elbow 90, FRP MATERIAL, MANUFACTURER STD	16	---		$289	$0	
309	1PF	Flange WN, FRP MATERIAL, MANUFACTURER STD	2	---		$14	$0	
310	1PF	Flange WN, FRP MATERIAL, MANUFACTURER STD	4	---		$20	$0	
311	1PF	Flange WN, FRP MATERIAL, MANUFACTURER STD	6	---	12	$39	$468	
312	1PF	Flange WN, FRP MATERIAL, MANUFACTURER STD	8	---		$89	$0	
313	1PF	Flange WN, FRP MATERIAL, MANUFACTURER STD	10	---		$171	$0	
314	1PF	Flange WN, FRP MATERIAL, MANUFACTURER STD	12	---		$258	$0	
315	1PF	Flange WN, FRP MATERIAL, MANUFACTURER STD	16	---		$411	$0	
316	1PF	STUD BOLT/2 HEAVY HEX NUTS, ASTM A193 GR. B7/A194 GR.2H, ASME B18.2.1/ASME B18.2.2	2	---	0	$12	$0	
317	1PF	STUD BOLT/2 HEAVY HEX NUTS, ASTM A193 GR. B7/A194 GR.2H, ASME B18.2.1/ASME B18.2.2	4	---	0	$22	$0	
318	1PF	STUD BOLT/2 HEAVY HEX NUTS, ASTM A193 GR. B7/A194 GR.2H, ASME B18.2.1/ASME B18.2.2	6	---	10	$43	$430	
319	1PF	STUD BOLT/2 HEAVY HEX NUTS, ASTM A193 GR. B7/A194 GR.2H, ASME B18.2.1/ASME B18.2.2	8	---	0	$61	$0	
320	1PF	STUD BOLT/2 HEAVY HEX NUTS, ASTM A193 GR. B7/A194 GR.2H, ASME B18.2.1/ASME B18.2.2	10	---	0	$76	$0	

Imported Piping BOQ

Sq No.	Piping Class	Item	Main Size (in)	Second Size (in)	QTY	Unit Price	Total Price	Remarks
321	1PF	STUD BOLT/2 HEAVY HEX NUTS, ASTM A193 GR. B7/A194 GR.2H, ASME B18.2.1/ASME B18.2.2	12	---	0	$76	$0	
322	1PF	STUD BOLT/2 HEAVY HEX NUTS, ASTM A193 GR. B7/A194 GR.2H, ASME B18.2.1/ASME B18.2.2	16	---	0	$85	$0	
323	1PF	GASKET, SPIRAL WOUND, RF, 150#, 4.5MM, SS316, RING TYPE, ASME B16.20	2	---	0	$5	$0	
324	1PF	GASKET, SPIRAL WOUND, RF, 150#, 4.5MM, SS316, RING TYPE, ASME B16.20	4	---	0	$11	$0	
325	1PF	GASKET, SPIRAL WOUND, RF, 150#, 4.5MM, SS316, RING TYPE, ASME B16.20	6	---	8	$15	$120	
326	1PF	GASKET, SPIRAL WOUND, RF, 150#, 4.5MM, SS316, RING TYPE, ASME B16.20	8	---	0	$24	$0	
327	1PF	GASKET, SPIRAL WOUND, RF, 150#, 4.5MM, SS316, RING TYPE, ASME B16.20	10	---	0	$36	$0	
328	1PF	GASKET, SPIRAL WOUND, RF, 150#, 4.5MM, SS316, RING TYPE, ASME B16.20	12	---	0	$43	$0	
329	1PF	GASKET, SPIRAL WOUND, RF, 150#, 4.5MM, SS316, RING TYPE, ASME B16.20	16	---	0	$50	$0	
330	1PF	PIPE, ERW, BW, STD, SS	2	---	21	$18	$378	
331	1SF	PIPE, ERW, BW, STD, SS	4	---	83	$48	$3,984	
332	1SF	PIPE, ERW, BW, STD, SS	6	---	12	$86	$1,032	
333	1SF	PIPE, ERW, BW, STD, SS	8	---	34	$133	$4,522	
334	1SF	PIPE, ERW, BW, STD, SS	10	---	45	$195	$8,775	
335	1SF	PIPE, ERW, BW, STD, SS	12	---	10	$233	$2,330	
336	1SF	PIPE, ERW, BW, STD, SS	16	---	34	$344	$11,696	
337	1SF	ELBOW 90, LR, BW, STD, SMLS, SS	2	---	8	$20	$160	
338	1SF	ELBOW 90, LR, BW, STD, SMLS, SS	4	---	34	$24	$816	
339	1SF	ELBOW 90, LR, BW, STD, SMLS, SS	6	---	2	$38	$76	
340	1SF	ELBOW 90, LR, BW, STD, SMLS, SS	8	---	1	$100	$100	
341	1SF	ELBOW 90, LR, BW, STD, SMLS, SS	10	---	10	$190	$1,900	
342	1SF	ELBOW 90, LR, BW, STD, SMLS, SS	12	---	1	$308	$308	
343	1SF	ELBOW 90, LR, BW, STD, SMLS, SS	16	---	12	$596	$7,152	
344	1SF	ELBOW 45, LR, BW, STD, SMLS, SS	2	---	1	$20	$20	
345	1SF	ELBOW 45, LR, BW, STD, SMLS, SS	4	---	5	$24	$120	
346	1SF	ELBOW 45, LR, BW, STD, SMLS, SS	6	---	4	$38	$152	
347	1SF	ELBOW 45, LR, BW, STD, SMLS, SS	8	---	12	$100	$1,200	
348	1SF	ELBOW 45, LR, BW, STD, SMLS, SS	10	---	8	$190	$1,520	
349	1SF	ELBOW 45, LR, BW, STD, SMLS, SS	12	---		$308	$0	
350	1SF	ELBOW 45, LR, BW, STD, SMLS, SS	16	---		$596	$0	
351	1SF	TEE STRAIGHT, BW, STD, SMLS, SS	2	---	1	$30	$30	
352	1SF	TEE STRAIGHT, BW, STD, SMLS, SS	4	---	7	$36	$252	

Imported Piping BOQ

Sq No.	Piping Class	Item	Main Size (in)	Second Size (in)	QTY	Unit Price	Total Price	Remarks
353	1SF	TEE STRAIGHT, BW, STD, SMLS, SS	6	---	3	$84	$252	
354	1SF	TEE STRAIGHT, BW, STD, SMLS, SS	8	---	6	$150	$900	
355	1SF	TEE STRAIGHT, BW, STD, SMLS, SS	10	---	4	$248	$992	
356	1SF	TEE STRAIGHT, BW, STD, SMLS, SS	12	---		$286	$0	
357	1SF	TEE STRAIGHT, BW, STD, SMLS, SS	16	---		$566	$0	
358	1SF	TEE REDUCING, BW, STD, SMLS, SS	2	---		$32	$0	
359	1SF	TEE REDUCING, BW, STD, SMLS, SS	4	2	3	$38	$114	
360	1SF	TEE REDUCING, BW, STD, SMLS, SS	6	4		$90	$0	
361	1SF	TEE REDUCING, BW, STD, SMLS, SS	8	6	2	$158	$316	
362	1SF	TEE REDUCING, BW, STD, SMLS, SS	10	8		$262	$0	
363	1SF	TEE REDUCING, BW, STD, SMLS, SS	12	10		$302	$0	
364	1SF	TEE REDUCING, BW, STD, SMLS, SS	16	12	4	$596	$2,384	
365	1SF	REDUCER CON, BW, STD, SMLS, SS	2	---		$22	$0	
366	1SF	REDUCER CON, BW, STD, SMLS, SS	4	2	4	$29	$116	
367	1SF	REDUCER CON, BW, STD, SMLS, SS	6	4	2	$38	$76	
368	1SF	REDUCER CON, BW, STD, SMLS, SS	8	6		$65	$0	
369	1SF	REDUCER CON, BW, STD, SMLS, SS	10	---	4	$76	$304	
370	1SF	REDUCER CON, BW, STD, SMLS, SS	12	---	6	$101	$606	
371	1SF	REDUCER CON, BW, STD, SMLS, SS	16	12		$121	$0	
372	1SF	REDUCER ECC, BW, STD, SMLS, SS	2	---		$26	$0	
373	1SF	REDUCER ECC, BW, STD, SMLS, SS	4	---		$34	$0	
374	1SF	REDUCER ECC, BW, STD, SMLS, SS	6	4		$45	$0	
375	1SF	REDUCER ECC, BW, STD, SMLS, SS	8	6		$75	$0	
376	1SF	REDUCER ECC, BW, STD, SMLS, SS	10	---		$88	$0	
377	1SF	REDUCER ECC, BW, STD, SMLS, SS	12	---		$117	$0	
378	1SF	REDUCER ECC, BW, STD, SMLS, SS	16	---		$140	$0	
379	1SF	FLANGE, WN, RF, 150#, STD, SS	2	---	12	$32	$384	
380	1SF	FLANGE, WN, RF, 150#, STD, SS	4	---	23	$47	$1,081	
381	1SF	FLANGE, WN, RF, 150#, STD, SS	6	---	13	$91	$1,183	
382	1SF	FLANGE, WN, RF, 150#, STD, SS	8	---	4	$206	$824	
383	1SF	FLANGE, WN, RF, 150#, STD, SS	10	---	7	$397	$2,779	
384	1SF	FLANGE, WN, RF, 150#, STD, SS	12	---	4	$601	$2,404	

Imported Piping BOQ

Sq No.	Piping Class	Item	Main Size (in)	Second Size (in)	QTY	Unit Price	Total Price	Remarks
385	1SF	FLANGE, WN, RF, 150#, STD, SS	16	---	5	$958	$4,790	
386	1CP	STUD BOLT/2 HEAVY HEX NUTS, ASTM A193 GR. B7/A194 GR.2H, ASME B18.2.1/ASME B18.2.2	2	---	10	$12	$120	
387	1CP	STUD BOLT/2 HEAVY HEX NUTS, ASTM A193 GR. B7/A194 GR.2H, ASME B18.2.1/ASME B18.2.2	4	---	19	$22	$418	
388	1CP	STUD BOLT/2 HEAVY HEX NUTS, ASTM A193 GR. B7/A194 GR.2H, ASME B18.2.1/ASME B18.2.2	6	---	11	$43	$473	
389	1CP	STUD BOLT/2 HEAVY HEX NUTS, ASTM A193 GR. B7/A194 GR.2H, ASME B18.2.1/ASME B18.2.2	8	---	4	$61	$244	
390	1CP	STUD BOLT/2 HEAVY HEX NUTS, ASTM A193 GR. B7/A194 GR.2H, ASME B18.2.1/ASME B18.2.2	10	---	6	$76	$456	
391	1CP	STUD BOLT/2 HEAVY HEX NUTS, ASTM A193 GR. B7/A194 GR.2H, ASME B18.2.1/ASME B18.2.2	12	---	4	$76	$304	
392	1CP	STUD BOLT/2 HEAVY HEX NUTS, ASTM A193 GR. B7/A194 GR.2H, ASME B18.2.1/ASME B18.2.2	16	---	4	$85	$340	
393	1CP	GASKET, SPIRAL WOUND, RF, 150#, 4.5MM, SS316, RING TYPE, ASME B16.20	2	---	8	$5	$40	
394	1CP	GASKET, SPIRAL WOUND, RF, 150#, 4.5MM, SS316, RING TYPE, ASME B16.20	4	---	16	$11	$176	
395	1CP	GASKET, SPIRAL WOUND, RF, 150#, 4.5MM, SS316, RING TYPE, ASME B16.20	6	---	9	$15	$135	
396	1CP	GASKET, SPIRAL WOUND, RF, 150#, 4.5MM, SS316, RING TYPE, ASME B16.20	8	---	4	$24	$96	
397	1CP	GASKET, SPIRAL WOUND, RF, 150#, 4.5MM, SS316, RING TYPE, ASME B16.20	10	---	5	$36	$180	
398	1CP	GASKET, SPIRAL WOUND, RF, 150#, 4.5MM, SS316, RING TYPE, ASME B16.20	12	---	4	$43	$172	
399	1CP	GASKET, SPIRAL WOUND, RF, 150#, 4.5MM, SS316, RING TYPE, ASME B16.20	16	---	4	$50	$200	
400	1SF	FLANGE, BLIND, RF, 150#, STD, SS	2	---		$24	$0	
401	1SF	FLANGE, BLIND, RF, 150#, STD, SS	4	---	1	$34	$34	
402	1SF	FLANGE, BLIND, RF, 150#, STD, SS	6	---	2	$66	$132	
403	1SF	FLANGE, BLIND, RF, 150#, STD, SS	8	---	2	$145	$290	
404	1SF	FLANGE, BLIND, RF, 150#, STD, SS	10	---	1	$280	$280	
405	1SF	FLANGE, BLIND, RF, 150#, STD, SS	12	---		$423	$0	
406	1SF	FLANGE, BLIND, RF, 150#, STD, SS	16	---		$685	$0	
407	1SF	STUD BOLT/2 HEAVY HEX NUTS, ASTM A193 GR. B7/A194 GR.2H, ASME B18.2.1/ASME B18.2.2	2	---	0	$12	$0	
408	1SF	STUD BOLT/2 HEAVY HEX NUTS, ASTM A193 GR. B7/A194 GR.2H, ASME B18.2.1/ASME B18.2.2	4	---	1	$22	$22	
409	1SF	STUD BOLT/2 HEAVY HEX NUTS, ASTM A193 GR. B7/A194 GR.2H, ASME B18.2.1/ASME B18.2.2	6	---	2	$43	$86	
410	1SF	STUD BOLT/2 HEAVY HEX NUTS, ASTM A193 GR. B7/A194 GR.2H, ASME B18.2.1/ASME B18.2.2	8	---	2	$61	$122	
411	1SF	STUD BOLT/2 HEAVY HEX NUTS, ASTM A193 GR. B7/A194 GR.2H, ASME B18.2.1/ASME B18.2.2	10	---	1	$76	$76	
412	1SF	STUD BOLT/2 HEAVY HEX NUTS, ASTM A193 GR. B7/A194 GR.2H, ASME B18.2.1/ASME B18.2.2	12	---	0	$76	$0	
413	1SF	STUD BOLT/2 HEAVY HEX NUTS, ASTM A193 GR. B7/A194 GR.2H, ASME B18.2.1/ASME B18.2.2	16	---	0	$85	$0	
414	1SF	GASKET, SPIRAL WOUND, RF, 150#, 4.5MM, SS316, RING TYPE, ASME B16.20	2	---	0	$5	$0	
415	1SF	GASKET, SPIRAL WOUND, RF, 150#, 4.5MM, SS316, RING TYPE, ASME B16.20	4	---	1	$11	$11	
416	1SF	GASKET, SPIRAL WOUND, RF, 150#, 4.5MM, SS316, RING TYPE, ASME B16.20	6	---	2	$15	$30	

Imported Piping BOQ

Sq No.	Piping Class	Item	Main Size (in)	Second Size (in)	QTY	Unit Price	Total Price	Remarks
417	1SF	GASKET, SPIRAL WOUND, RF, 150#, 4.5MM, SS316, RING TYPE, ASME B16.20	8	---	2	$24	$48	
418	1SF	GASKET, SPIRAL WOUND, RF, 150#, 4.5MM, SS316, RING TYPE, ASME B16.20	10	---	1	$36	$36	
419	1SF	GASKET, SPIRAL WOUND, RF, 150#, 4.5MM, SS316, RING TYPE, ASME B16.20	12	---	0	$43	$0	
420	1SF	GASKET, SPIRAL WOUND, RF, 150#, 4.5MM, SS316, RING TYPE, ASME B16.20	16	---	0	$50	$0	
421	1SF	CAP, BW, 150#, STD, SS	2	---		$17	$0	
422	1SF	CAP, BW, 150#, STD, SS	4	---	4	$29	$116	
423	1SF	CAP, BW, 150#, STD, SS	6	---	2	$65	$130	
424	1SF	CAP, BW, 150#, STD, SS	8	---		$111	$0	
425	1SF	CAP, BW, 150#, STD, SS	10	---	2	$292	$584	
426	1SF	CAP, BW, 150#, STD, SS	12	---	1	$383	$383	
427	1SF	CAP, BW, 150#, STD, SS	16	---		$581	$0	
428	1SF	SPECTACLE BLIND, RF, 150#, SS	2	---		$951	$0	
429	1SF	SPECTACLE BLIND, RF, 150#, SS	4	---	1	$1,548	$1,548	
430	1SF	SPECTACLE BLIND, RF, 150#, SS	6	---	3	$2,350	$7,050	
431	1SF	SPECTACLE BLIND, RF, 150#, SS	8	---		$3,499	$0	
432	1SF	SPECTACLE BLIND, RF, 150#, SS	10	---		$3,929	$0	
433	1SF	SPECTACLE BLIND, RF, 150#, SS	12	---		$6,726	$0	
434	1SF	SPECTACLE BLIND, RF, 150#, SS	16	---		$9,998	$0	
435	1SF	Gate Valve, FLGD, 150#, SS, RF	2	---	2	$574	$1,148	
436	1SF	Gate Valve, FLGD, 150#, SS, RF	4	---		$934	$0	
437	1SF	Gate Valve, FLGD, 150#, SS, RF	6	---	3	$1,417	$4,251	
438	1SF	Gate Valve, FLGD, 150#, SS, RF	8	---	2	$2,110	$4,220	
439	1SF	Gate Valve, FLGD, 150#, SS, RF	10	---	5	$2,369	$11,845	
440	1SF	Gate Valve, FLGD, 150#, SS, RF	12	---	2	$4,055	$8,110	
441	1SF	Gate Valve, FLGD, 150#, SS, RF	16	---		$6,027	$0	
442	1SF	Globe Valve, FLGD, 150#, SS, RF	2	---	4	$1,061	$4,244	
443	1SF	Globe Valve, FLGD, 150#, SS, RF	4	---	5	$1,979	$9,895	
444	1SF	Globe Valve, FLGD, 150#, SS, RF	6	---	3	$3,612	$10,836	
445	1SF	Globe Valve, FLGD, 150#, SS, RF	8	---		$4,289	$0	
446	1SF	Globe Valve, FLGD, 150#, SS, RF	10	---	3	$7,035	$21,105	
447	1SF	Globe Valve, FLGD, 150#, SS, RF	12	---		$8,133	$0	
448	1SF	Globe Valve, FLGD, 150#, SS, RF	16	---	1	$9,949	$9,949	

Imported Piping BOQ

Sq No.	Piping Class	Item	Main Size (in)	Second Size (in)	QTY	Unit Price	Total Price	Remarks
449	1SF	Ball Valve, RB , FLGD, 150#, SS, RF	2	---		$490	$0	
450	1SF	Ball Valve, RB , FLGD, 150#, SS, RF	4	---	3	$689	$2,067	
451	1SF	Ball Valve, RB , FLGD, 150#, SS, RF	6	---	1	$798	$798	
452	1SF	Ball Valve, RB , FLGD, 150#, SS, RF	8	---		$1,090	$0	
453	1SF	Ball Valve, RB , FLGD, 150#, SS, RF	10	---	1	$2,265	$2,265	
454	1SF	Ball Valve, RB , FLGD, 150#, SS, RF	12	---	4	$3,265	$13,060	
455	1SF	Ball Valve, RB , FLGD, 150#, SS, RF	16	---		$5,267	$0	
456	1SF	Check Valve, SWING, , FLGD, 150#, SS, RF	2	---		$834	$0	
457	1SF	Check Valve, SWING, , FLGD, 150#, SS, RF	4	---		$1,287	$0	
458	1SF	Check Valve, SWING, , FLGD, 150#, SS, RF	6	---	2	$2,743	$5,486	
459	1SF	Check Valve, SWING, , FLGD, 150#, SS, RF	8	---		$5,907	$0	
460	1SF	Check Valve, SWING, , FLGD, 150#, SS, RF	10	---	1	$8,378	$8,378	
461	1SF	Check Valve, SWING, , FLGD, 150#, SS, RF	12	---	1	$12,954	$12,954	
462	1SF	Check Valve, SWING, , FLGD, 150#, SS, RF	16	---	1	$15,747	$15,747	
463	1SF	Y-Type Strainer, FLGD, 150#, SS, RF	2	---		$834	$0	
464	1SF	Y-Type Strainer, FLGD, 150#, SS, RF	4	---	1	$1,287	$1,287	
465	1SF	Y-Type Strainer, FLGD, 150#, SS, RF	6	---		$2,743	$0	
466	1SF	Y-Type Strainer, FLGD, 150#, SS, RF	8	---	1	$5,907	$5,907	
467	1SF	Y-Type Strainer, FLGD, 150#, SS, RF	10	---		$8,378	$0	
468	1SF	Y-Type Strainer, FLGD, 150#, SS, RF	12	---	2	$12,954	$25,908	
469	1SF	Y-Type Strainer, FLGD, 150#, SS, RF	16	---	1	$15,747	$15,747	
470	1SF	T-Type Strainer, FLGD, 150#, SS, RF	2	---		$1,003	$0	
471	1SF	T-Type Strainer, FLGD, 150#, SS, RF	4	---		$1,827	$0	
472	1SF	T-Type Strainer, FLGD, 150#, SS, RF	6	---		$3,000	$0	
473	1SF	T-Type Strainer, FLGD, 150#, SS, RF	8	---		$4,849	$0	
474	1SF	T-Type Strainer, FLGD, 150#, SS, RF	10	---	4	$7,358	$29,432	
475	1SF	T-Type Strainer, FLGD, 150#, SS, RF	12	---		$8,922	$0	
476	1SF	T-Type Strainer, FLGD, 150#, SS, RF	16	---		$13,504	$0	
477	3CP	PIPE, ERW, BW, STD, API 5L GR.B, ASME B36.10M	2	---	41	$9	$369	
478	3CP	PIPE, ERW, BW, STD, API 5L GR.B, ASME B36.10M	4	---	20	$25	$500	
479	3CP	PIPE, ERW, BW, STD, API 5L GR.B, ASME B36.10M	6	---	125	$45	$5,625	
480	3CP	PIPE, ERW, BW, STD, API 5L GR.B, ASME B36.10M	8	---		$70	$0	

Imported Piping BOQ

Sq No.	Piping Class	Item	Main Size (in)	Second Size (in)	QTY	Unit Price	Total Price	Remarks
481	3CP	PIPE, ERW, BW, STD, API 5L GR.B, ASME B36.10M	10	---	50	$103	$5,150	
482	3CP	PIPE, ERW, BW, STD, API 5L GR.B, ASME B36.10M	12	---	540	$123	$66,420	
483	3CP	PIPE, ERW, BW, STD, API 5L GR.B, ASME B36.10M	16	---		$182	$0	
484	3CP	ELBOW 90, LR, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9	2	---	10	$10	$100	
485	3CP	ELBOW 90, LR, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9	4	---		$12	$0	
486	3CP	ELBOW 90, LR, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9	6	---	4	$19	$76	
487	3CP	ELBOW 90, LR, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9	8	---	6	$50	$300	
488	3CP	ELBOW 90, LR, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9	10	---		$95	$0	
489	3CP	ELBOW 90, LR, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9	12	---	8	$154	$1,232	
490	3CP	ELBOW 90, LR, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9	16	---		$298	$0	
491	3CP	ELBOW 45, LR, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9	2	---		$10	$0	
492	3CP	ELBOW 45, LR, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9	4	---		$12	$0	
493	3CP	ELBOW 45, LR, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9	6	---		$19	$0	
494	3CP	ELBOW 45, LR, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9	8	---	25	$50	$1,250	
495	3CP	ELBOW 45, LR, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9	10	---		$95	$0	
496	3CP	ELBOW 45, LR, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9	12	---	16	$154	$2,464	
497	3CP	ELBOW 45, LR, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9	16	---		$298	$0	
498	3CP	TEE STRAIGHT, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9	2	---		$15	$0	
499	3CP	TEE STRAIGHT, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9	4	---	1	$18	$18	
500	3CP	TEE STRAIGHT, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9	6	---	5	$42	$210	
501	3CP	TEE STRAIGHT, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9	8	---	10	$75	$750	
502	3CP	TEE STRAIGHT, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9	10	---	4	$124	$496	
503	3CP	TEE STRAIGHT, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9	12	---	30	$143	$4,290	
504	3CP	TEE STRAIGHT, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9	16	---		$283	$0	
505	3CP	TEE REDUCING, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9	2	---		$16	$0	
506	3CP	TEE REDUCING, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9	4	2		$19	$0	
507	3CP	TEE REDUCING, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9	6	4		$45	$0	
508	3CP	TEE REDUCING, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9	8	6	1	$79	$79	
509	3CP	TEE REDUCING, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9	10	8		$131	$0	
510	3CP	TEE REDUCING, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9	12	10		$151	$0	
511	3CP	TEE REDUCING, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9	16	12	5	$298	$1,490	
512	3CP	REDUCER CON, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9	2	---		$24	$0	

Imported Piping BOQ

Sq No.	Piping Class	Item	Main Size (in)	Second Size (in)	QTY	Unit Price	Total Price	Remarks
513	3CP	REDUCER CON, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9	4	2		$32	$0	
514	3CP	REDUCER CON, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9	6	4	4	$42	$168	
515	3CP	REDUCER CON, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9	8	6		$72	$0	
516	3CP	REDUCER CON, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9	10	---		$84	$0	
517	3CP	REDUCER CON, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9	12	---	7	$112	$784	
518	3CP	REDUCER CON, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9	16	12	14	$134	$1,876	
519	3CP	REDUCER ECC, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9	2	---		$28	$0	
520	3CP	REDUCER ECC, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9	4	---		$37	$0	
521	3CP	REDUCER ECC, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9	6	4		$49	$0	
522	3CP	REDUCER ECC, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9	8	6	4	$83	$332	
523	3CP	REDUCER ECC, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9	10	---		$97	$0	
524	3CP	REDUCER ECC, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9	12	---	4	$129	$516	
525	3CP	REDUCER ECC, BW, STD, SMLS, ASTM A234 GR.WPB, ASME B16.9	16	---		$155	$0	
526	3CP	FLANGE, WN, RF, 300#, STD, ASTM A105, ASME B16.5	2	---		$22	$0	
527	3CP	FLANGE, WN, RF, 300#, STD, ASTM A105, ASME B16.5	4	---	2	$32	$64	
528	3CP	FLANGE, WN, RF, 300#, STD, ASTM A105, ASME B16.5	6	---		$63	$0	
529	3CP	FLANGE, WN, RF, 300#, STD, ASTM A105, ASME B16.5	8	---		$143	$0	
530	3CP	FLANGE, WN, RF, 300#, STD, ASTM A105, ASME B16.5	10	---		$275	$0	
531	3CP	FLANGE, WN, RF, 300#, STD, ASTM A105, ASME B16.5	12	---	224	$415	$92,960	
532	3CP	FLANGE, WN, RF, 300#, STD, ASTM A105, ASME B16.5	16	---		$662	$0	
533	3CP	STUD BOLT/2 HEAVY HEX NUTS, ASTM A193 GR. B7/A194 GR.2H, ASME B18.2.1/ASME B18.2.2	2	---	0	$14	$0	
534	3CP	STUD BOLT/2 HEAVY HEX NUTS, ASTM A193 GR. B7/A194 GR.2H, ASME B18.2.1/ASME B18.2.2	4	---	2	$25	$50	
535	3CP	STUD BOLT/2 HEAVY HEX NUTS, ASTM A193 GR. B7/A194 GR.2H, ASME B18.2.1/ASME B18.2.2	6	---	0	$48	$0	
536	3CP	STUD BOLT/2 HEAVY HEX NUTS, ASTM A193 GR. B7/A194 GR.2H, ASME B18.2.1/ASME B18.2.2	8	---	0	$68	$0	
537	3CP	STUD BOLT/2 HEAVY HEX NUTS, ASTM A193 GR. B7/A194 GR.2H, ASME B18.2.1/ASME B18.2.2	10	---	0	$84	$0	
538	3CP	STUD BOLT/2 HEAVY HEX NUTS, ASTM A193 GR. B7/A194 GR.2H, ASME B18.2.1/ASME B18.2.2	12	---	180	$84	$15,120	
539	3CP	STUD BOLT/2 HEAVY HEX NUTS, ASTM A193 GR. B7/A194 GR.2H, ASME B18.2.1/ASME B18.2.2	16	---	0	$94	$0	
540	3CP	GASKET, SPIRAL WOUND, RF, 150#, 4.5MM, SS316, RING TYPE, ASME B16.20	2	---	0	$7	$0	
541	3CP	GASKET, SPIRAL WOUND, RF, 150#, 4.5MM, SS316, RING TYPE, ASME B16.20	4	---	2	$14	$28	
542	3CP	GASKET, SPIRAL WOUND, RF, 150#, 4.5MM, SS316, RING TYPE, ASME B16.20	6	---	0	$19	$0	
543	3CP	GASKET, SPIRAL WOUND, RF, 150#, 4.5MM, SS316, RING TYPE, ASME B16.20	8	---	0	$30	$0	
544	3CP	GASKET, SPIRAL WOUND, RF, 150#, 4.5MM, SS316, RING TYPE, ASME B16.20	10	---	0	$45	$0	

Imported Piping BOQ

Sq No.	Piping Class	Item	Main Size (in)	Second Size (in)	QTY	Unit Price	Total Price	Remarks
545	3CP	GASKET, SPIRAL WOUND, RF, 150#, 4.5MM, SS316, RING TYPE, ASME B16.20	12	---	144	$53	$7,632	
546	3CP	GASKET, SPIRAL WOUND, RF, 150#, 4.5MM, SS316, RING TYPE, ASME B16.20	16	---	0	$62	$0	
547	3CP	FLANGE, BLIND, RF, 300#, STD, ASTM A105, ASME B16.5	2	---		$16	$0	
548	3CP	FLANGE, BLIND, RF, 300#, STD, ASTM A105, ASME B16.5	4	---		$24	$0	
549	3CP	FLANGE, BLIND, RF, 300#, STD, ASTM A105, ASME B16.5	6	---		$45	$0	
550	3CP	FLANGE, BLIND, RF, 300#, STD, ASTM A105, ASME B16.5	8	---		$101	$0	
551	3CP	FLANGE, BLIND, RF, 300#, STD, ASTM A105, ASME B16.5	10	---		$193	$0	
552	3CP	FLANGE, BLIND, RF, 300#, STD, ASTM A105, ASME B16.5	12	---	2	$292	$584	
553	3CP	FLANGE, BLIND, RF, 300#, STD, ASTM A105, ASME B16.5	16	---		$473	$0	
554	3CP	STUD BOLT/2 HEAVY HEX NUTS, ASTM A193 GR. B7/A194 GR.2H, ASME B18.2.1/ASME B18.2.2	2	---	0	$14	$0	
555	3CP	STUD BOLT/2 HEAVY HEX NUTS, ASTM A193 GR. B7/A194 GR.2H, ASME B18.2.1/ASME B18.2.2	4	---	0	$25	$0	
556	3CP	STUD BOLT/2 HEAVY HEX NUTS, ASTM A193 GR. B7/A194 GR.2H, ASME B18.2.1/ASME B18.2.2	6	---	0	$48	$0	
557	3CP	STUD BOLT/2 HEAVY HEX NUTS, ASTM A193 GR. B7/A194 GR.2H, ASME B18.2.1/ASME B18.2.2	8	---	0	$68	$0	
558	3CP	STUD BOLT/2 HEAVY HEX NUTS, ASTM A193 GR. B7/A194 GR.2H, ASME B18.2.1/ASME B18.2.2	10	---	0	$84	$0	
559	3CP	STUD BOLT/2 HEAVY HEX NUTS, ASTM A193 GR. B7/A194 GR.2H, ASME B18.2.1/ASME B18.2.2	12	---	2	$84	$168	
560	3CP	STUD BOLT/2 HEAVY HEX NUTS, ASTM A193 GR. B7/A194 GR.2H, ASME B18.2.1/ASME B18.2.2	16	---	0	$94	$0	
561	3CP	GASKET, SPIRAL WOUND, RF, 150#, 4.5MM, SS316, RING TYPE, ASME B16.20	2	---	0	$7	$0	
562	3CP	GASKET, SPIRAL WOUND, RF, 150#, 4.5MM, SS316, RING TYPE, ASME B16.20	4	---	0	$14	$0	
563	3CP	GASKET, SPIRAL WOUND, RF, 150#, 4.5MM, SS316, RING TYPE, ASME B16.20	6	---	0	$19	$0	
564	3CP	GASKET, SPIRAL WOUND, RF, 150#, 4.5MM, SS316, RING TYPE, ASME B16.20	8	---	0	$30	$0	
565	3CP	GASKET, SPIRAL WOUND, RF, 150#, 4.5MM, SS316, RING TYPE, ASME B16.20	10	---	0	$45	$0	
566	3CP	GASKET, SPIRAL WOUND, RF, 150#, 4.5MM, SS316, RING TYPE, ASME B16.20	12	---	2	$53	$106	
567	3CP	GASKET, SPIRAL WOUND, RF, 150#, 4.5MM, SS316, RING TYPE, ASME B16.20	16	---	0	$62	$0	
568	3CP	CAP, BW, 300#, STD, ASTM A105, ASME B16.5	2	---		$9	$0	
569	3CP	CAP, BW, 300#, STD, ASTM A105, ASME B16.5	4	---		$16	$0	
570	3CP	CAP, BW, 300#, STD, ASTM A105, ASME B16.5	6	---	4	$36	$144	
571	3CP	CAP, BW, 300#, STD, ASTM A105, ASME B16.5	8	---		$62	$0	
572	3CP	CAP, BW, 300#, STD, ASTM A105, ASME B16.5	10	---	2	$164	$328	
573	3CP	CAP, BW, 300#, STD, ASTM A105, ASME B16.5	12	---		$215	$0	
574	3CP	CAP, BW, 300#, STD, ASTM A105, ASME B16.5	16	---		$326	$0	
575	3CP	SPECTACLE BLIND, RF, 300#, ASTM A105, ASME B16.48	2	---		$62	$0	
576	3CP	SPECTACLE BLIND, RF, 300#, ASTM A105, ASME B16.48	4	---	2	$75	$150	

Imported Piping BOQ

Sq No.	Piping Class	Item	Main Size (in)	Second Size (in)	QTY	Unit Price	Total Price	Remarks
577	3CP	SPECTACLE BLIND, RF, 300#, ASTM A105, ASME B16.48	6	---	2	$86	$172	
578	3CP	SPECTACLE BLIND, RF, 300#, ASTM A105, ASME B16.48	8	---		$102	$0	
579	3CP	SPECTACLE BLIND, RF, 300#, ASTM A105, ASME B16.48	10	---	4	$168	$672	
580	3CP	SPECTACLE BLIND, RF, 300#, ASTM A105, ASME B16.48	12	---		$234	$0	
581	3CP	SPECTACLE BLIND, RF, 300#, ASTM A105, ASME B16.48	16	---		$294	$0	
582	3CP	Gate Valve, FLGD, 300#, CS, RF	2	---		$770	$0	
583	3CP	Gate Valve, FLGD, 300#, CS, RF	4	---	1	$1,253	$1,253	
584	3CP	Gate Valve, FLGD, 300#, CS, RF	6	---		$1,902	$0	
585	3CP	Gate Valve, FLGD, 300#, CS, RF	8	---	2	$2,831	$5,662	
586	3CP	Gate Valve, FLGD, 300#, CS, RF	10	---	8	$3,179	$25,432	
587	3CP	Gate Valve, FLGD, 300#, CS, RF	12	---	10	$5,443	$54,430	
588	3CP	Gate Valve, FLGD, 300#, CS, RF	16	---		$8,091	$0	
589	3CP	Globe Valve, FLGD, 300#, CS, RF	2	---		$1,111	$0	
590	3CP	Globe Valve, FLGD, 300#, CS, RF	4	---	2	$1,808	$3,616	
591	3CP	Globe Valve, FLGD, 300#, CS, RF	6	---		$2,746	$0	
592	3CP	Globe Valve, FLGD, 300#, CS, RF	8	---	4	$4,087	$16,348	
593	3CP	Globe Valve, FLGD, 300#, CS, RF	10	---	12	$4,589	$55,068	
594	3CP	Globe Valve, FLGD, 300#, CS, RF	12	---	4	$7,855	$31,420	
595	3CP	Globe Valve, FLGD, 300#, CS, RF	16	---	6	$11,678	$70,068	
596	3CP	Ball Valve, RB , FLGD, 300#, CS, RF	2	---	37	$2,200	$81,400	
597	3CP	Ball Valve, RB , FLGD, 300#, CS, RF	4	---	2	$4,105	$8,210	
598	3CP	Ball Valve, RB , FLGD, 300#, CS, RF	6	---	21	$7,492	$157,332	
599	3CP	Ball Valve, RB , FLGD, 300#, CS, RF	8	---	2	$8,896	$17,792	
600	3CP	Ball Valve, RB , FLGD, 300#, CS, RF	10	---		$14,592	$0	
601	3CP	Ball Valve, RB , FLGD, 300#, CS, RF	12	---	6	$16,872	$101,232	
602	3CP	Ball Valve, RB , FLGD, 300#, CS, RF	16	---		$20,639	$0	
603	3CP	Check Valve, SWING, , FLGD, 300#, CS, RF	2	---		$1,033	$0	
604	3CP	Check Valve, SWING, , FLGD, 300#, CS, RF	4	---	4	$1,452	$5,808	
605	3CP	Check Valve, SWING, , FLGD, 300#, CS, RF	6	---	10	$1,682	$16,820	
606	3CP	Check Valve, SWING, , FLGD, 300#, CS, RF	8	---	6	$2,297	$13,782	
607	3CP	Check Valve, SWING, , FLGD, 300#, CS, RF	10	---	8	$4,775	$38,200	
608	3CP	Check Valve, SWING, , FLGD, 300#, CS, RF	12	---	8	$6,884	$55,072	

Imported Piping BOQ

Sq No.	Piping Class	Item	Main Size (in)	Second Size (in)	QTY	Unit Price	Total Price	Remarks
609	3CP	Check Valve, SWING, , FLGD, 300#, CS, RF	16	---		$11,105	$0	
610	3CP	Y-Type Strainer, FLGD, 300#, CS, RF	2	---		$683	$0	
611	3CP	Y-Type Strainer, FLGD, 300#, CS, RF	4	---	2	$1,053	$2,106	
612	3CP	Y-Type Strainer, FLGD, 300#, CS, RF	6	---		$2,244	$0	
613	3CP	Y-Type Strainer, FLGD, 300#, CS, RF	8	---	2	$4,833	$9,666	
614	3CP	Y-Type Strainer, FLGD, 300#, CS, RF	10	---	8	$6,855	$54,840	
615	3CP	Y-Type Strainer, FLGD, 300#, CS, RF	12	---	6	$10,599	$63,594	
616	3CP	Y-Type Strainer, FLGD, 300#, CS, RF	16	---		$12,884	$0	
617	3CP	T-Type Strainer, FLGD, 300#, CS, RF	2	---		$683	$0	
618	3CP	T-Type Strainer, FLGD, 300#, CS, RF	4	---		$1,053	$0	
619	3CP	T-Type Strainer, FLGD, 300#, CS, RF	6	---		$2,244	$0	
620	3CP	T-Type Strainer, FLGD, 300#, CS, RF	8	---		$4,833	$0	
621	3CP	T-Type Strainer, FLGD, 300#, CS, RF	10	---		$6,855	$0	
622	3CP	T-Type Strainer, FLGD, 300#, CS, RF	12	---		$10,599	$0	
623	3CP	T-Type Strainer, FLGD, 300#, CS, RF	16	---		$12,884	$0	
624	3CP	Butterfly Valve, FLGD, 300#, CS, RF	2	---		$817	$0	
625	3CP	Butterfly Valve, FLGD, 300#, CS, RF	4	---		$1,488	$0	
626	3CP	Butterfly Valve, FLGD, 300#, CS, RF	6	---		$2,444	$0	
627	3CP	Butterfly Valve, FLGD, 300#, CS, RF	8	---	8	$3,950	$31,600	
628	3CP	Butterfly Valve, FLGD, 300#, CS, RF	10	---		$5,994	$0	
629	3CP	Butterfly Valve, FLGD, 300#, CS, RF	12	---	10	$7,268	$72,680	
630	3CP	Butterfly Valve, FLGD, 300#, CS, RF	16	---		$11,001	$0	

TOTAL: $4,723,939

Imported Electrical BOQ - Phase I

Sl. No.	EQUIPMENT DESCRIPTION	QTY (lot or m)	REMARKS	Unit Price US $	TOTAL Price US $
1	Transformer 10 / 0.42 kV, 1600KVA, 3-Phase, hermetically sealed, silicon oil-immersed power transformer	2		$140,000	$280,000
2	10 kV HV switchgear (3-phase, 3-wire, 50 Hz, 25kA, 1s, 630A, single bus section design	1	1 VCB & 2 off VCU	$120,000	$120,000
3	Normal 400 / 230 V LV switchgear (3-phase, 4-wire, 50 Hz, 65kA, 1s, 2500A, two bus section design with two incomers and bus coupler)	1		$130,000	$130,000
4	Emergency 400 / 230 V LV switchgear (3-phase, 4-wire, 50 Hz, 100A, 1s, 100A, single bus section design)	1		$130,000	$130,000
5	AC 400/230V Main Lighting/Electrical Power Distribution Board	1	NO DESIGN COMPLETED (ROUGH ESTIMATE ONLY)	$150,000	$150,000
6	Lighting & small power dist. Board (Indoor)	5	NO DESIGN COMPLETED (ROUGH ESTIMATE ONLY)	$27,000	$135,000
11	10KVA AC UPS with Batteries	1	NO DESIGN COMPLETED (ROUGH ESTIMATE ONLY)	$60,000	$60,000
12	Motor Remote Control Units (RCU)	40	DESIGN NOT FULLY COMPLETED (ROUGH ESTIMATE ONLY)	$1,100	$44,000
13	400 V LV Motors (Part of Pump package)	40	Included in the Pump Prices	N/A	$0
14	VFD Motor Starters	40		$5,500	$220,000
15	Cathodic Protection System Package	2	NO DESIGN COMPLETED (ROUGH ESTIMATE ONLY)	$5,000	$10,000
16	UPS Distribution boards	2	NO DESIGN COMPLETED (ROUGH ESTIMATE ONLY)	$4,000	$8,000
17	Jetty Power Dist.Board	2	NO DESIGN COMPLETED (ROUGH ESTIMATE ONLY)	$6,400	$12,800

Imported Electrical BOQ - Phase I

Sl. No.	EQUIPMENT DESCRIPTION	QTY (lot or m)	REMARKS	Unit Price US $	TOTAL Price US $
18	LV Capacitor Bank (500kVAR, 400V)	1	NO DESIGN COMPLETED (ROUGH ESTIMATE ONLY)	$3,200	$3,200
19	1750KVA Diesel Genset @ 0.4 kV - Duty	2		$160,000	$320,000
20	1750KVA Diesel Genset @ 0.4 kV - Stand by	1		$160,000	$160,000
21	50 KVA Diesel Gen set @ 0.4 kV	1		$20,000	$20,000
22	MV Cable	1000	NO DESIGN COMPLETED (QUANTITIES CANNOT BE ESTIMATED)	$32	$32,000
23	LV Power Cables	7500	NO DESIGN COMPLETED (QUANTITIES CANNOT BE ESTIMATED)	$12	$90,000
24	LV Control Cables	1050	NO DESIGN COMPLETED (QUANTITIES CANNOT BE ESTIMATED)	$10	$10,500
25	Earthing and Lightning Protection	16	NO DESIGN COMPLETED (QUANTITIES CANNOT BE ESTIMATED)	$1,900	$30,400
26	Cable Termination and Glands	1600	NO DESIGN COMPLETED (QUANTITIES CANNOT BE ESTIMATED)	$180	$288,000
27	Installation Materials	1 lot	NO DESIGN COMPLETED (QUANTITIES CANNOT BE ESTIMATED)	$175,000	$175,000
28	Cable Ladder/Trays	2200	NO DESIGN COMPLETED (QUANTITIES CANNOT BE ESTIMATED)	$24	$52,800
29	Lighting Fixtures	200	NO DESIGN COMPLETED (QUANTITIES CANNOT BE ESTIMATED)	$1,500	$300,000
30	Small Power Sockets	200	NO DESIGN COMPLETED (QUANTITIES CANNOT BE ESTIMATED)	$95	$19,000

Imported Electrical BOQ - Phase I

Sl. No.	EQUIPMENT DESCRIPTION	QTY (lot or m)	REMARKS	Unit Price US $	TOTAL Price US $
31	Conduit	1600	NO DESIGN COMPLETED (QUANTITIES CANNOT BE ESTIMATED)	$10	$16,000

TOTAL:	$2,816,700

Imported Instrumentation BOQ

ITEM NO.	TYPE	DESCRIPTION	QTY	UNIT	Unit Price US $	Total Price US $	REMARKS
1	**Bitumen Tank and loading**						
	FIELD INSTRUMENTS	Pressure Transmitter with Diaphragm Seal (3" ASME 150# RF SS316L)	8	No.	$1,000	$8,000	
		Pressure Gauge with Diaphragm Seal (2" ASME 150# RF), Case SS 304, Wetted material SS316L	15	No.	$250	$3,750	
		Vibrating Fork Level Switch (3" ASME 150# RF SS304), Wetted SS 316L	4	No.	$1,200	$4,800	
		On-Off Gate Valve including Air Filter Regulator, 1 SOV, 2 Limit Switches (3" Size, 300#, RF, Body: CF8M, Trim: SS316)	4	No.	$1,000	$4,000	
2	**White product ship loading/ Tank/ Pump/ Truck Loading**						
	FIELD INSTRUMENTS	Pressure Transmitter with Diaphragm Seal (3" ASME 150# RF SS316L)	12	No.	$900	$10,800	
		Pressure Gauge with Diaphragm Seal (2" ASME 150# RF), Case SS 304, Wetted material SS316L	15	No.	$200	$3,000	
		Vibrating Fork Level Switch (3" ASME 150# RF SS304), Wetted SS 316L	6	No.	$1,200	$7,200	
		On-Off Gate Valve including Air Filter Regulator, 1 SOV, 2 Limit Switches (10" Size, 150#, RF, Body: CF8M, Trim: SS316)	6	No.	$1,000	$6,000	
		Pressure Safety Valve (1" ASME 150# RF Material), Trim SS 316	18	No.	$1,100	$19,800	
		Restriction Orifice Plate (2" ASME 150# SERRIRATED RF, 304/304L)	4	No.	$400	$1,600	
		Pressure Safety Valve (1" ASME 150# RF Material), Trim SS 316	6	No.	$1,100	$6,600	

Imported Instrumentation BOQ

ITEM NO.	TYPE	DESCRIPTION	QTY	UNIT	Unit Price US $	Total Price US $	REMARKS
		Diffenentail Pressure Gauge (1/2" NPT), Case SS 304, Wetted material SS316L	8	No.	$500	$4,000	
3	Jet Fuel Ship off loading / Jet Fuel Tank and Jet fuel Pump						
	FIELD INSTRUMENTS	Pressure Transmitter with Diaphragm Seal (3" ASME 150# RF SS316L)	6	No.	$900	$5,400	
		Pressure Gauge with Diaphragm Seal (2" ASME 150# RF), Case SS 304, Wetted material SS316L	8	Nos.	$200	$1,600	
		Vibrating Fork Level Switch (3" ASME 150# RF SS304), Wetted SS 316L	4	Nos.	$1,200	$4,800	
		On-Off Gate Valve including Air Filter Regulator, 1 SOV, 2 Limit Switches (10" Size, 300#, RF, Body: CF8M, Trim: SS316)	2	No.	$16,000	$32,000	
		Pressure Safety Valve (1" ASME 150# RF Material), Trim SS 316	8	Nos.	$1,100	$8,800	
		Pressure Safety Valve (1" ASME 150# RF Material), Trim SS 316	2	Nos.	$1,100	$2,200	
		Restriction Orifice Plate (2" ASME 150# SERRIRATED RF, 304/304L)	2	No.	$400	$800	
		Pressure Safety Valve (1" ASME 150# RF Material), Trim SS 316	2	No.	$1,100	$2,200	
		Diffenentail Pressure Gauge (1/2" NPT), Case SS 304, Wetted material SS316L	7	No.	$500	$3,500	
		Pressure Gauge (1/2" NPT), Case SS 304, Wetted material SS316L	4	Nos.	$200	$800	
4	Blending/cutback/emulsion unit						

Imported Instrumentation BOQ

ITEM NO.	TYPE	DESCRIPTION	QTY	UNIT	Unit Price US $	Total Price US $	REMARKS
		Pressure Transmitter with Diaphragm Seal (3" ASME 150# RF SS316L)	6	No.	$900	$5,400	
		Pressure Gauge with Diaphragm Seal (2" ASME 150# RF), Case SS 304, Wetted material SS316L	8	Nos.	$200	$1,600	
		Vibrating Fork Level Switch (3" ASME 150# RF SS304), Wetted SS 316L	6	Nos.	$1,200	$7,200	
		On-Off Gate Valve including Air Filter Regulator, 1 SOV, 2 Limit Switches (6" Size, 300#, RF, Body: CF8M, Trim: SS316)	6	No.	$10,000	$60,000	
		Pressure Safety Valve (1" ASME 150# RF Material), Trim SS 316	12	Nos.	$1,100	$13,200	
		Pressure Safety Valve (1" ASME 150# RF Material), Trim SS 316	6	Nos.	$1,100	$6,600	
		Restriction Orifice Plate (2" ASME 150# SERRIRATED RF, 304/304L)	1	No.	$400	$400	
		Pressure Safety Valve (1" ASME 150# RF Material), Trim SS 316	2	No.	$1,100	$2,200	
		Diffenentail Pressure Gauge (1/2" NPT), Case SS 304, Wetted material SS316L	6	No.	$500	$3,000	
		Pressure Gauge (1/2" NPT), Case SS 304, Wetted material SS316L	10	Nos.	$200	$2,000	
5	Hot Oil system						
		Pressure Transmitter with Diaphragm Seal (3" ASME 150# RF SS316L)	2	No.	$900	$1,800	
		Control Valve, Globe Type including Air Filter Regulator (10" ASME 150# RF Body: CS A216 WCC, Trim: SS316)	4	No.	$20,000	$80,000	
		Pressure Gauge with Diaphragm Seal (2" ASME 150# RF), Case SS 304, Wetted material SS316L	7	Nos.	$200	$1,400	
		Pressure Safety Valve (10" ASME 150# RF Material:), Trim SS 316	4	Nos.	$5,000	$20,000	

Imported Instrumentation BOQ

ITEM NO.	TYPE	DESCRIPTION	QTY	UNIT	Unit Price US $	Total Price US $	REMARKS
		Level Gauge for the Oil Tank	2	Nos.	$2,000	$4,000	
6	**Potable water / Utility /Air compressor**						
		Pressure Gauge - Bourdon Type (1/2" NPT-M), Case SS 304, Wetted Material SS316L	6	Nos.	$100	$600	
		Tank Level Transmitter (Radar type), 10" ANSI 150#RF	1	Nos.	$800	$800	
		Pressure Switch - bellow type, (1/2" NPT-M), Waeather proof , SPDT contact 2A 230 VAC , Cable entry 1/2 " NPT, Max pressure 20 barg	2	Nos.	$150	$300	
		Pressure Safety Valve (1" ASME 150# RF Material), Trim SS 316	1	Nos.	$800	$800	
		Pressure Transmitter with 2 way valve manifold, SS 316L (1/2" NPT-F) and 2" pipe SS316 mounting brackets	1	Nos.	$600	$600	
		Flow Totalizer ()	1	Nos.	$1,500	$1,500	
7	**Fire / Foam Water Tank and Pump**						
		Pressure Gauge - Bourdon Type (1/2" NPT-M), Case SS 304, Wetted Material SS316L	10	Nos.	$100	$1,000	
		Pressure Switch - bellow type, (1/2" NPT-M), Waeather proof , SPDT contact 2A 230 VAC , Cable entry 1/2 " NPT, Max pressure 20 barg	4	Nos.	$150	$600	
		Level Gauge for Fire water tank (4000 m^3)	1	Nos.	$800	$800	
		Level Gauge for Diesel Day Tank	1	Nos.	$1,000	$1,000	

Imported Instrumentation BOQ

ITEM NO.	TYPE	DESCRIPTION	QTY	UNIT	Unit Price US $	Total Price US $	REMARKS
		Vibrating Fork or Float type Level Switch (2" ASME 150# RF SS316)	5	Nos.	$1,200	$6,000	
		Pressure Safety Valve (1" ASME 150# RF Material), Trim SS 316	1	Nos.	$1,100	$1,100	
		Flow Totalizer	1	Nos.	$1,500	$1,500	
		Pressure Transmitter with 2 way valve manifold, SS 316L (1/2" NPT-F) and 2" pipe SS316 mounting brackets	1	Nos.	$900	$900	
		Tank Level Transmitter (Radar type), 10" ANSI 150#RF	1	Nos.	$6,000	$6,000	
		Pressure Switch - bellow type, (1/2" NPT-M), Waeather proof , SPDT contact 2A 230 VAC , Cable entry 1/2 " NPT, Max pressure 20 barg	4	Nos.	$150	$600	
		Vibrating Fork or Float type Level Switch (2" ASME 150# RF SS316)	2	Nos.	$1,200	$2,400	
		Temperature Gauges Bi metal type (1/2" NPT- M) Case SS 304,	2	Nos.	$100	$200	
8	**Cables**						
	Cables	12 PR x 0.75 mm2 PVC/ ISOS/ SWA/ PVC- FR	3600	mtrs	$6	$21,600	
		12 PR x 1.5 mm2 PVC/ ISOS/ SWA/ PVC- FR	7000	mtrs	$8	$56,000	
		Cable Termination accessories for all cable runs	700		$5	$3,500	
		Supply and installation of IP65 universal double compression type cable gland, dual certified for Ex'd' for cable connections in panels, junction boxes & Instruments:	500		$5	$2,500	
9	**Junction Box**						

Imported Instrumentation BOQ

ITEM NO.	TYPE	DESCRIPTION	QTY	UNIT	Unit Price US $	Total Price US $	REMARKS
		Supply of Diecast Aluminimum , "Ex-d" certified, IP66, Junction boxes with Channel supports, Size 150 (H) X 150(W) X 120 (D) mm:	35	Nos.	$120	$4,200	
		Supply of SS316, IP65, Junction boxes with Channel supports, Size 150 (H) X 150(W) X 120 (D) mm suitable for 12 Apir cable	35	Nos.	$120	$4,200	
10	INSTALLATION MATERIALS						
		Hot dip galvanized steel for fabrication of all installation accessories including: (a) 2" pipe stanchions for instruments and JBs, (b) Mounting plates, (c) C-channels & Angle channels, (d) 150mm Trays, (e) Tray elbows & bends etc.	as required by SITE CONTRACTOR SCOPE			$10,000	
11	PLC						
		PLC System	3 set	No.		$100,000	
		1. 2 no. Redunant controller chassis					
		2. Non redundant power supply					
		2. nodes for IO Count					
		Aanlog Input - 48 nos.					
		Analog Output - 8 nos.					
		Digital Input - 135 nos.					
		Digital Output- 60 nos.					
		3. Nodes with communication bus					
		4. 2 nos. Ethemet switch with 24 ports and , 2 fiber optic couplers.					
		5. Cabinets					
		System cum marshalling Cabinet - 2 nos.					
		Netwrok cabinet - 1 no.					
		Power Distribution cabinet - 2 no.					
		6. Ethernet cables with RJ 45 connectors CAT6					
		7. Work stations					
		HMI station with 19" Screen - 4 nos.					

Imported Instrumentation BOQ

ITEM NO.	TYPE	DESCRIPTION	QTY	UNIT	Unit Price US $	Total Price US $	REMARKS
		Engineering station 19" screen - 1 no.					
		8. Modbus RTU link to following packages					
		Air compressor PLC					
		Weighling Bridge System					
		Tank Gauging system					
		Hot Oil Boiler 2 nos.					
		Fire and alarm system					
12	TELECOM (CCTV SYSTEM)						
						$95,000	
		CCTV WORKSTATION (WITH 19" LCD MONITOR/ OPERATING SOFTWARE AND PROCESSOR)	2	Nos.			
		CCTV CONTROLLER (1 DESKTOP WITH CONTROL KEYPAD/ JOYSTICK FOR PTZ)	1	Nos.			
		CCTV Matrix WORKSTATION (WITH 19" LCD MONITOR/ OPERATING SOFTWARE AND PROCESSOR)	1	Nos.			
		CCTV Management Server WORKSTATION (WITH 19" LCD MONITOR/ OPERATING SOFTWARE AND PROCESSOR)	1	Nos.			
		CENTRAL CABINET FOR CCTV SYSTEM INCLUSIVE OF: - FIBER OPTIC PATCH PANEL - ETHERNET SWITCH - NETWORK MANAGEMENT SOFTWARE - NTP TIME SERVER - NETWORK VIDEO RECORDER - CCTV INTEGRATION SOFTWARE WITH SECURITY MANAGEMENT SYSTEM - FIBER OPTIC CONVERTER (MULTI MODE) - ANALOG CCTV FIBER OPTIC CONVERTER CHASSIS - COPPER PATCH PANEL - SERVER FOR CCTV SOFTWARE - INTEGRATED SECURITY MANAGEMENT SYSTEM SOFTWARE) - I/O TERMINAL - MAIN CIRCUIT BOARD	1	Nos.			

Imported Instrumentation BOQ

ITEM NO.	TYPE	DESCRIPTION	QTY	UNIT	Unit Price US $	Total Price US $	REMARKS
		OUTDOOR FIXED ANALOG CAMERA (WEATHER PROOF) WITH 2" POLE AND MOUNTING BRACKET	As per Plot plan qty to be recommnded by vendor	Nos.			
		OUTDOOR FIXED ANALOG CAMERA (EXPLOSION PROOF) WITH 2" POLE AND MOUNTING BRACKET					
		OUTDOOR PTZ ANALOG CAMERA (WEATHER PROOF) WITH 2" POLE AND MOUNTING BRACKETS					
		OUTDOOR PTZ ANALOG CAMERA (EXPLOSION PROOF) WITH 2" POLE AND MOUNTING BRACKETS					
		ANALOG CCTV FIBER OPTIC CONVERTER (MULTI MODE)					
		JUNCTION BOX (WEATHER PROOF), GRP MATERIAL WITH SS316 CABLE GLANDS					
		RG-59 COAXIAL CABLE					
		2 CORE OUTDOOR TYPE MULTI MODE (MM) ARMOURED FIBER OPTIC CABLE					
13	Weighing scle						
						$45,000	
		Interface with Weighling controller					
		ANALOG FIBER OPTIC CONVERTER (MULTI MODE)	4	Nos.			
		4 CORE OUTDOOR TYPE MULTI MODE (MM) ARMOURED FIBER OPTIC CABLE	400	mtrs			
		(Weighling scale controller should have necessary port for interface on Modbus TCP/IP or RS 485)					

Imported Instrumentation BOQ

ITEM NO.	TYPE	DESCRIPTION	QTY	UNIT	Unit Price US $	Total Price US $	REMARKS
14	Heat / smoke detectors						
						$40,000	
		MAIN FIRE ALARM PANEL WITH MIMIC PANEL	1	Nos.			
		SMOKE DETECTOR COMPLETE WITH BASE	30	Nos.			10 in control room and 20 in Substation
		HEAT DETECTOR COMPLETE WITH BASE	11	Nos.			Only for Tanks
		ALARM BELL	8	Nos.			
		MANUAL CALL POINT	8	Nos.			
		STROBE	8	Nos.			
		2 PAIR X 1.5 mm2 COPPER CABLE, LOW SMOKE, HALOGEN FREE, FIRE RESISTANT	As required				
		2 PAIR X 2.5 mm2 COPPER CABLE, LOW SMOKE, HALOGEN FREE, FIRE RESISTANT	As required				
		1" CONDUIT AND FITTINGS	As required				
15	Jetty Facilities / MLA						
						$8,000	
		Marine loading Arm Interface					
		ANALOG FIBER OPTIC CONVERTER (MULTI MODE)	4	Nos.			
		4 CORE OUTDOOR TYPE MULTI MODE (MM) ARMOURED FIBER OPTIC CABLE	400	mtrs			
		Emergency Push button Station , Exproof enclosure with Indication lamps					
16	Tank Gauging system					$1,500,000	

Imported Instrumentation BOQ

ITEM NO.	TYPE	DESCRIPTION	QTY	UNIT	Unit Price US $	Total Price US $	REMARKS
		Non-contact type Radar gauges / Frequency Modulated Continuous Wave (FMCW) technology. Antenna shall be Array type suitable for still pipe installation (still pipe will be provided by others). Each radar gauge shall have a flanged process connection and an integrated transmitter unit. A remote terminal box or junction box shall be provided for external signal and power cable connections. This junction box shall act as the fieldbus hub for the 2-wire communication to control room. The gauge assembly shall be weatherproof to IP67 and suitable for use in hazardous area as per respective datasheets. The gauges shall be provided with required software or protocol converter for integration witht he PLC system. Tank Gauge System panel will be in the Control room.	30 sets				
					TOTAL:	$2,267,150	

Notes:

Metering systems of the loading arms have been considered as part of the truck loading arm packages.

Project: PUMA ENERGY ASIA SUN

JETTY FACILITIES BOQ (IMPORTED)

Item	Description	Estimated Qty.	Unit	Rate (USD)	Imported Materials (USD)
B.	***BERTH FACILITIES***				
B.I	***PLATFORM***				
1	**Piling Works**				
	Vertical PC pile (D800 - D1000) 12m length per segment	1025	No.	1,800.00	1,476,000.00
	Raking PC pile (D800 - D1000) 12m length per segment	382	No.	1,800.00	550,080.00
2	**Steel Tubular Piles**				
	Vertical Steel Tubular Pile (D800 - D1000) 25m length per segment	450	No.	10,500.00	3,780,000.00
	Raking Steel Tubular Pile (D800 - D1000) 27m length per segment	177	No.	11,500.00	1,626,560.00
4	**Rebar**	**1,661,547**	t		
	Transversal cross-beams	469,739	kg	0.65	259,530.80
	The expanded part of transversal beams	112,456	kg	0.65	62,131.94
	Pipe Trench	215,835	kg	0.65	119,248.84
	Deck slab	844,241	kg	0.65	466,443.15
	Connection between piles and deck	19,276	kg	0.65	10,649.99
5	**Platform Berth Furniture**				
	Steel Tubular Fender Sleeve Pile (D1000) 20m length per segment	16	No.	8,800.00	116,688.00
	Vertical Steel Tubular Pile (D800) 25m length per segment	16	No.	11,000.00	149,600.00
	Pined connection	16	No.	2,500.00	33,150.00
	Fender Cone SCN	24	No.	57,000.00	1,368,000.00
	Bollard	16	No.	3,000.00	46,800.00
	Ladder	4	No.	1,500.00	4,972.50
	Fender panel	16	No.	1,800.00	23,868.00
	Mooring bar for barges	31	No.	3,000.00	79,560.00
B.II	***MOORING DOLPHIN***				
1	**Piling Works**				
	Raking PC pile (D800 - D1000) 12m length per segment	91	No.	1,800.00	131,040.00
2	**Steel Tubular Piles**				
	Raking Steel Tubular Pile (D800 - D1000) 25m length per segment	24	No.	10,000.00	192,000.00
4	**Rebar**	**19**	t		
	Mooring dolphin	18,216	kg	0.65	10,064.34
	Connection between piles and deck	976	kg	0.65	539.24
5	**Mooring Dolphin Furniture**				
	Bollard	2	No.	3,000.00	6,000.00
	Handrail	18	m	1,000.00	15,300.00
	HD-PE sliding fender (7m length)	2	No.	5,000.00	8,500.00
	Mooring ring (3)	4	No.	2,000.00	6,800.00
	Ladder (1)	2	No.	1,000.00	1,700.00
	Lifebuoy	2	No.	1,000.00	2,000.00

B.III	***WALKWAY***				
	Steelwork	11	t	650.00	5,678.40
B.IV	***Dredging (122,500cbm)***				
	Dredging	102,500.0	cbm	2.50	205,000.00
B.VI	***Trestle***				
	Crosshead				
	Piling Works				
	Vertical PC pile (D800 - D1000) 12m length per segment	48.0	No.	1,800.00	69,120.00
	Raking PC pile (D800- D1000) 12m length per segment	104.0	No.	1,800.00	149,760.00
	Steel Tubular Piles				
	Vertical Steel Tubular Pile (D800 - D1000) 20m length per segme	24.0	No.	10,500.00	201,600.00
	Raking Steel Tubular Pile (D800- D1000) 25m length per segmen	48.0	No.	11,500.00	441,600.00
	Rebar	87.0	t		
	Cross head beams	85,600.0	kg	0.65	47,294.00
	Connection between piles and deck	1,848.0	kg	0.65	1,021.02
	Roadway 15 m wide				
	Rebar	98.0	t		
	Road deck	72,111.0	kg	0.65	39,841.33
	Concrete I Beam 1100x550	25,876.0	kg	0.65	14,296.49
	Vehicle Restraint Barrier	226.0	m	1,000.00	180,800.00
	Lighting column	4.0	No.	1,900.00	6,460.00
					Imported Materials (USD)
	Total Cost - PC + Steel				**11,909,698.04**

Project: PUMA ENERGY ASIA SUN

JETTY FACILITIES BOQ (LOCAL)

Item	Description	Estimated Qty.	Unit	Rate (USD)	Local Materials (USD)
B.	***BERTH FACILITIES***				
B.I	***PLATFORM***				
3	**In-situ concrete**	**7,384**	**m3**		
	Transversal cross-beams	2,732	m3	350.00	764,960.00
	Transversal cross-beam expansions	750	m3	350.00	210,000.00
	Pipe Trench	864	m3	350.00	241,920.00
	Deck slab	2,877	m3	350.00	805,560.00
	Connection between piles and deck	161	m3	350.00	45,080.00
5	**Platform Berth Furniture**				
	Timber Secondary Fender pile 400x400	429	m	200.00	72,930.00
6	**Formwork**	**19,105**	**m2**		
	Sides	6,276	m2	15.00	75,312.00
	Slabs	1,654	m2	15.00	
	Beam	4,623	m2	15.00	
	Soffits	6,552	m2	15.00	78,624.00
B.II	***MOORING DOLPHIN***				
3	**In-situ concrete**	188	m3	350.00	52,640.00
5	**Mooring Dolphin Furniture**				
	Timber rubbing - 300x150	18	m	150.00	2,160.00
6	**Formwork**	174	m2	15.00	2,088.00
	Sides	94	m2		
	Soffits	80	m2		
B.V	***Revetment***				
	Revetment	536.0	cbm	75.00	28,140.00
B.VI	***Trestle***				
	Crosshead				
	In-situ concrete	488.0	m3		
	Cross head beams	472.0	m3	350.00	132,160.00
	Connection between piles and deck	16.0	m3	350.00	4,480.00
	Formwork	848.0	m2		
	Sides	536.0	m2	15.00	6,432.00
	Soffits	312.0	m2	15.00	3,744.00
	Roadway 15 m wide				
	In-situ concrete	675.0	m3		
	Road deck	481.0	m3	350.00	134,680.00
	Concrete I Beam	174.0	m3	350.00	48,720.00
	Surfacing	20.0	m3	350.00	5,600.00
	Formwork	2,421.0	m2		
	Deck slab	940.0	m2	15.00	11,280.00
	Beam	1,481.0	m2	15.00	17,772.00
					Local Materials (USD)
	Total Cost - PC + Steel				**2,744,282.00**

Imported Hot Oil Tracing BOQ

Total Length of tracers (3/4", SCH40, CS Pipe):	9000 m
No of valves associated with this length (3/4" Gate Vales):	278

3/4", SCH40, CS Pipe (Unit Price):	$8
3/4", Gate Valve, 800#, SW (Unit Price):	$57

Tracer Price:	$72,000
Valve Price:	$15,846

Price: $87,846

Imported Tank and Piping Insulation BOQ

Total Length of Insulated Pipes	4500	m
Average line size:	12"	
Insulation area:	632.39	m2
Insulation area of tanks:	6575.35	m2
	7207.74	m2
Insulation unit Price: (Rockwool insulation and Aluminum cladding)	$35	per m2

Insulation Total Price:	**$252,271**

Total Rockwool:	7207.74	m^2
Total Cladding (Aluminium):	7207.74	m^2

Imported Tank & Piping Painting BOQ

Overall Piping Surface Area:	9145	m2
Overall Length of Insulated Piping:	3000	m
Average Line Size:	12"	
Overall Surface Area of Insulated Piping:	246	m2
Overall surface Area of Insulated Tanks:	6575.35	m2
TOTAL:	6821.17	m2
Overall Surface Area of Un-insulated Piping:	8900	m2
Overall Surface Area of Un-insulated tanks:	43500	m2
TOTAL:	52400	m2
Cost of primer:	$4.00	$/m2
Cost of paint:	$12.00	$/m2
Total Cost of Primer:	$27,284.69	$
Total of cost Painting:	$628,795.87	$
TOTAL COST:	**$656,081**	**$**
Liters of paint:	**131.22**	m^3